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The aim of the Society being to arrive at true conclusions through free discussion, it is distinctly to be understood that the Editor is not held responsible for statements made in the *Journal*.

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Names of ships should be underlined to denote *italics*, and not written within inverted commas.

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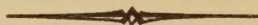
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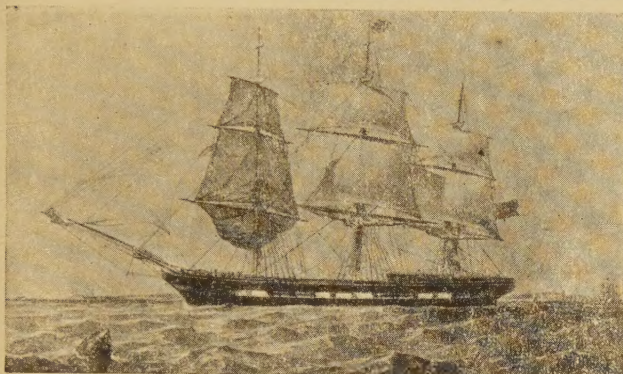
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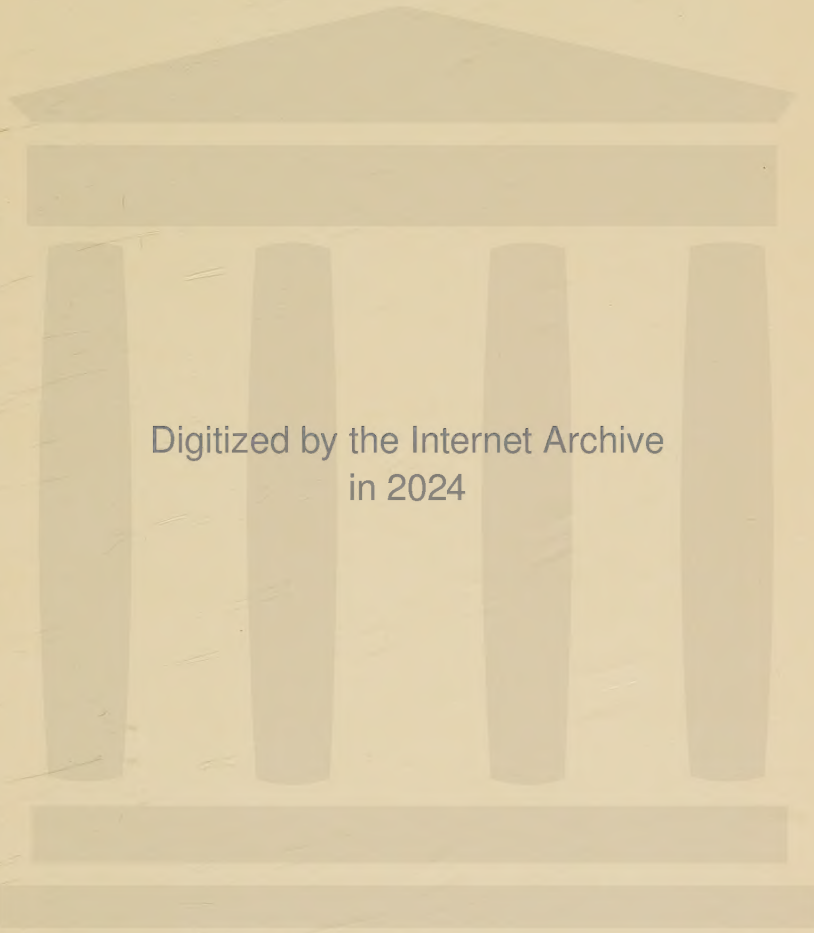
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PORTUGUESE 'NAOS' (CARRACKS)
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(Frontispiece)

The MARINER'S MIRROR

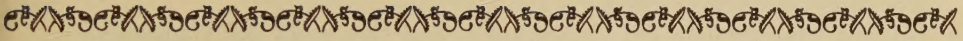
WHEREIN MAY BE DISCOVERED HIS
ART, CRAFT & MYSTERY

*after the manner of their
use in all ages and
among all
Nations*



VOL. 43. No. 3

1957



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PLATE

Portuguese 'Maos' (Carracks)	<i>Frontispiece</i>
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OBITUARY

Rear-Admiral Sir Patrick Macnamara K.B.E., C.B., member of the Society since 1912, died on 3 April 1957 at his home, Invercharron House, Ardgay, Ross-shire. Joined *Britannia* 1901, went to sea 1902, having won the King's Dirk—and the heavy-weight boxing. Already as a midshipman he was keenly interested in the art of fighting at sea. He had an inquiring mind, never took anything for granted, and always formed his own ideas. In 1910 he qualified in gunnery and became gunnery officer of the *Tiger* in 1915 for the rest of the war. *The Fighting at Jutland* includes his account. In May 1919 he joined the Naval Section of the British Delegation—a piece of good fortune, for here he met and married another member of the staff, Miss Ellen Nickerson. On leaving the sea, he was chosen to go round the Public Schools, addressing the boys on the Navy as a profession. He retired in 1936.

Rejoining in 1939 he became Chief of Staff to Admiral Sir Reginald Plunkett-Ernlé-Drax, Commander-in-chief at the Nore, and was thus closely concerned in the mounting task of defending the vital East Coast convoys, the evacuation of Dunkirk, and the preparations for repelling invasion. Thereafter he became Rear-Admiral Scapa and Admiral-Superintendent Orkney. He loved his shooting and fishing and was an excellent shot with the pistol. The writer has lost in him his oldest and closest friend.

A. H. TAYLOR

MORE ABOUT THE SHIP OF THE RENAISSANCE

By Commandant L. Guilleux la Roërie

SOME books and articles are read for mere reading, and others are read, or reread, with pencil and pad at hand. For myself, the contributions of our Hon. Vice-president, Mr Morton Nance, have always belonged to the latter category. After culling from his article under the above title (*M.M.*, Vol. 41, nos. 3 and 4), I wondered if the subjects of my marginal notes might possibly be of some interest to our members; this led me to have them drafted, and to the present article.

KOG AND COCCHA IN THE MEDITERRANEAN

Ships of the Atlantic type were adopted by the Mediterranean marine c. 1304, as is known from the often mentioned passage in the *Chronicles of the Villani*¹ (p. 150). According to these authors, the adoption was a matter of a sudden fancy which grew into a fashion. As a matter of fact, there is no suggestion that the Mediterranean people had ever thought of taking to the north and western type, with which they were well acquainted, having seen it frequently in their own waters, when kings of Britain, Norway, France, etc., took their fleets to the Holy Land or to Constantinople. Joinville tells us, for instance, that King-Saint Louis of France landed in Egypt in a cog (*coche*) from Normandy.

It would be interesting to find out the first pictorial evidence of the change. I know of no such evidence, of reasonably ascertained Mediterranean origin and date, for the one-masted ship. With the addition of a second mast aft, with a lateen mizen, the earliest instance with a known date that I have yet seen is the Pizzigani chart of 1367. The ships are not very well drawn; the lay artist often mixes up the uniformly checkered surfaces of sails and hull, but, as there are numerous drawings of these ships, affording mutual correction, the correct average may easily be recognized (Fig. 1). Here pictorial evidence likely lags on the facts, as it does, as a rule, towards literary evidence when both are available (the spritsail for instance, while mentioned as a usual feature in 1492 by Columbus [*Diario* . . . Oct. 24] fails to appear in pictures before the sixteenth-century type of ship is well established). Moreover, in this case, the drawings in the Pizzigani chart are of the kind which show progressive deformation at the hands of copyists,

¹ For abbreviations, and full references, see Appendix, p. 193.

thus suggesting that years of copying had lapsed since the original was drawn from life.

All the western pictures showing a second mast, which I have yet seen, are (or appear to be) more recent than the Pizzigani maps; this would confirm what the lateen shape of the sail already suggests, namely that the addition of the second mast was made by the Mediterraneans. It seems, from the circumstances and from the earliest evidence, that the Mediterraneans took to the western¹ type because they found it safer, in troubled times, to carry on their business in ships smaller, lighter and more handy than their big *naves* with huge sails; but the adopted features had been extended to the biggest ships by the time the pictures become fairly numerous. The vernacularized name of the cog (*coccha*, *cocca*) for the large two- then three-master which had become the all-Europe pattern before the last third of the fifteenth century (usually called the carrack type) was retained.

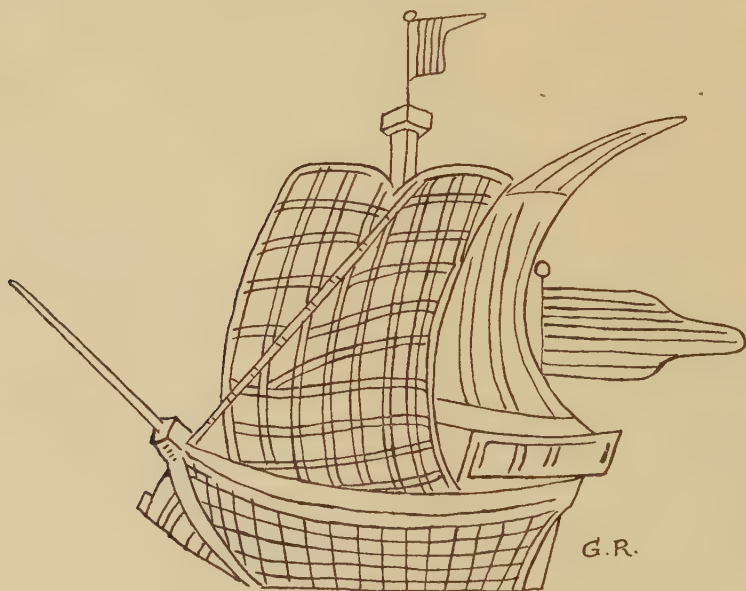


Fig. 1. From the Pizzigani chart, A.D. 1367.

WESTERN AND MEDITERRANEAN CARRACKS

To illustrate the carrack type, one usually refers to W. A.'s *Kraeck* (Morton Nance, fig. 15, p. 288, and *M.M.*, vol. II, no. 8, p. 227). This old choice may not be perfect, inasmuch as it includes a certain unrealistic mixture of western and southern features, but, as it is probably the best known picture

¹ *Western*, in this article, means non-Mediterranean Europe.

of its kind, let us keep it and add a few words about it. The so-called W. A. is usually credited with its first authorship, though with no certainty. Part of his work appears with the monogram of Israhel Van Mecheln: this is the case, for instance, of the ship described by Jal (*Glossaire, s.v. Navire*, p. 1052) and reproduced, from a South Kensington copy, by Mr Morton Nance ('A fifteenth century trader', *M.M.*, Vol. 1, p. 66, and vol. 11, p. 437). Etchings may be found with either W. A.'s, Israhel's, or even Dürer's monogram. Among the numerous copies of the *Kraek*, one should mention a large tapestry hanging in the Cluny Museum, Paris, because the dimensions there allow of more precision in details; it can be seen that the chain-plates are made of iron chain, that the hawse-hole is provided with an iron hawse rope, and that the base of the forecastle is partitioned into lateral rooms; the door of access, to the starboard side, being seen through the archway. One thing goes against the natural surmise that the watch-box-like affairs, on each side of the stern balcony, were used as wardrobes: the shield-shaped pieces just under them are shown as coats-of-arms; while, at the time of the *cottes hardies*, noble dames did not object to sitting on their blasonry, it seems unlikely that arms would be affixed in so undignified a place.

Mr Morton Nance has perfectly reviewed the differences between western and southern carracks, which I beg to sum up and comment further upon. The features of both types may, not infrequently, be seen mixed up in the same picture, but, in most cases, this is to be ascribed to the artist's fancy, and acceptable evidence of the inclusion of particular Mediterranean features in western ships or vice versa is scarce.

Shrouds. The Mediterraneans retained the shrouds set inside the gunwale, made taut by means of tackles, without ratlines, and easily dismantled. It may well have been more than mere abiding by custom. Pictures occasionally show a gang-plank resting on the rearmost, and lowest, part of the midship gunwale, where the shrouds would have been in the way. The Mediterraneans, used as they were to sailing pretty close to the wind with their lateeners, were likely anxious to have the square sail braced to the utmost, and, to make this possible, to be able to unhook one or more of the foremost lee shrouds. Another fact pointing to the same surmise is stated in the next paragraph.

Masthead rigging. In western carracks the upper ends of the shrouds come up to the bottom of the top, and I do not know of pictures where their fastening can be seen; everything points to the arrangement as shown by our president in his classic epitome (Anderson, *Sailing Ship*, p. 112). In Mediterranean carracks the shrouds, going up, along the mast, through the bottom of the top, and, no doubt, crossing over the head of the lower

mast, are fastened around the mast, well under the top, by a woolding-like binding. This is well shown (Fig. 2) in a carrack painted on an Italian chest of 1485 in the Arts Décoratifs Museum in Paris (*N. et M.*, Vol. 1, p. 213). It afforded room for a closer bracing of the yard—a lasting aim which, later, was likely responsible for the delay in fitting futtock shrouds and for the shrinking of tops in the big windjammers of fifty years ago.

'Chimney'. The 'chimney'; was it ever actually introduced into western ships? I remember no convincing piece of evidence for this. It is seen in medieval lateeners as early as pictures are available. No doubt the corresponding substantial play between the mast and the hole was intended for eventual correction of the mast's rake. From the Roman Antiquity up to modern times there is more than a strong suggestion that Mediterranean designers and sailors liked arrangements affording flexibility in reaching a well-balanced sail area; the variance as regards, *inter alia*, the rake of masts, can hardly be ascribed in full to artists' variations.

Top net. The presence of a conical boarding net on the top should be deemed as suggesting Mediterranean origin. This idea of having the top guarded against boarders fully agrees with the discarding of ratlines which would afford a permanent way for ascension; while the Jacob's ladder could easily be hoisted in, serving the same purpose as a drawbridge on shore.

Protruding beam-ends. There is no sign of this having been brought into the building of western ships. It is well known that the ancient Egyptians had the beams resting upon the thick walls of the hull because timber suitable for frames was scarce; the system was retained, by them or by their Mediterranean successors or rivals, probably because timber suitable for knees was hardly available. It would be interesting to study the matter in more recent times, in relation to the supply of adequate timber. The same reasons would play their part in the adoption of the two-piece yard.

The beams might have conveniently rested on the frames without protruding outside the planking, as their extension sideways must have been a minor nuisance; nevertheless there may be some reason why it was usual; some extra length of wood was perhaps desirable to minimize a

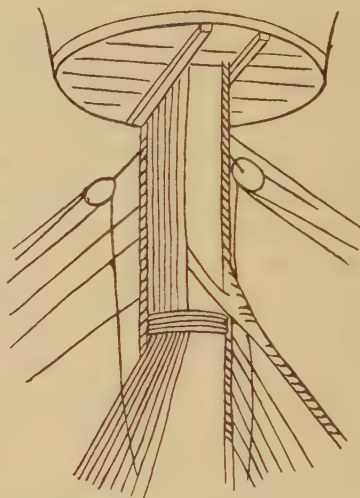


Fig. 2. Mediterranean headrigging.
From a Florentine chest of 1486.
Paris, Arts Décoratifs Museum.

tendency of the ends to split as the result of their nailing to the tops of the frames.

(An inventory of the dispersion areas of the system, east of Suez, might well lead to notions of ethnological interest; I do not remember if the matter is dealt with in the voluminous and valuable works of my ever-regretted friend James Hornell.)

Two-piece yard. The two-piece yard is never found, as far as I know, in acceptable pictures of western ships. Its presence in the square yards of Mediterranean carracks may have resulted from routine, abiding by the *inghinature* which was usual, and likely unavoidable, in the long lateen yards, but the fact that it is found in ancient Egyptian and Roman square yards may point to a dearth of spars long enough to make one-piece yards (see preceding paragraph).

Cargo-ports. The large square cargo-port aft is of Mediterranean origin: it is seen in the large medieval lateeners as soon as we get pictures of them. But there are reasons to suggest that it was adopted in the western carracks. It is found in pieces of evidence of unquestionable western origin, including at least one seaport, where the artist was able to see real ships. (Lead badges for pilgrims to Notre Dame de Boulogne, fifteenth century, Paris, Cluny Museum.)

Forecastle. The aspect of the forecastle (I mean the part under the triangular beak) is often confusing. Often it is filled with curved lines, the meaning of which is not always clear, as one does not know if they are intended to represent seams or if they are mere hatchings of the etcher. There seems to have been considerable variance in the incurvation of the upper wale and the height at which it joined the stem, either just at the latter's summit, adjacent to the floor of the triangular platform, or lower. We know to-day, from the Mataro model (*M.M.*, Vol. xv, p. 213, Vol. xvii, p. 325), that the curved lines actually represent clinker planking, the overlapping strakes being placed more or less vertically, the convexity of their edges facing forward. I do not think one could tell whether the system was used in western ships. A quite different arrangement is found in the latter: the upper wale goes to the stem with very little sheer; the quadrangular space above it is filled with nearly horizontal planking, with vertical cross-bars over it (Fig. 3, Warwick Pageant, fol. 25 r.). I have not yet traced this feature in pieces of distinctly Mediterranean origin.

Figure-head. The absence of the traditional dragon head, and its replacement by some scroll or sphere-like end suggests Mediterranean origin.

After-castle. As a rule the tilt-frame is smaller in Southerners, with its ridge-piece athwartship instead of longitudinal.

Skids. Another confusing matter is the existence of the skids, those

vertical fenders or cross-bars along the sides. A few Mediterranean pictures show them extending practically from end to end (Morton Nance, fig. 14, p. 285). In 1892 C. F. Duro and T. A. de Albertis used them in their respective reconstitutions of Columbus's ship, and so did Comandante J. Guillén y Tato in 1929. Duro credited these timbers with the part of, as it were, external frames, and this does not seem unlikely.



Fig. 3. From the Warwick Pageant, Cott. MS., Julius E IV, fol. 25r.—c. A.D. 1480–85.

But in many pictures, chiefly western, the numerous skids appear as the result of a 'proliferation' under the hands of copyists. It is commonplace, in pictures of those times, to find that such or such features, in limited number in the original, have been multiplied in a copy, to the extent of a full row. As regards these vertical cross-bars there is evidence in various pictures, chiefly of western ships, that they result from an arbitrary multiplication of the lower and upper knees of the chainwale, or their equivalents. First these pieces are displaced by the non-understanding copyist. In the W. A. *Kraeck* and the carrack of the Karlsruhe Pilgrimage MS. (Morton Nance, fig. 15, p. 288 and fig. 17, p. 289), the limited batch of 'skids' has been carried forward of the chainwale where it belonged. In a Breydenbach carrack (View of Modon, 1488, *N. et M.*, Vol. 1, p. 217) it has been carried somewhat aft; in another copy of the same original the artist has them melted into huge dead-eyes or shroud blocks (printed copies of a letter

of Columbus, 'Oceanica Classis', 1493, *N. et M.*, vol. 1, p. 236). It must be borne in mind that many of those etchers of the fifteenth century had retained the naïve ways of the medieval illuminists; when copying a picture they saw it as a sum of limited parts which they reproduced separately, without troubling to give them their respective place in the whole. Good illustrations of this are found, as regards wandering skids, in old pages of *M.M.* which I have not at hand just now, but a typical one is shown in Fig. 4. Each skid is shown with the convenient hollow to harbour the

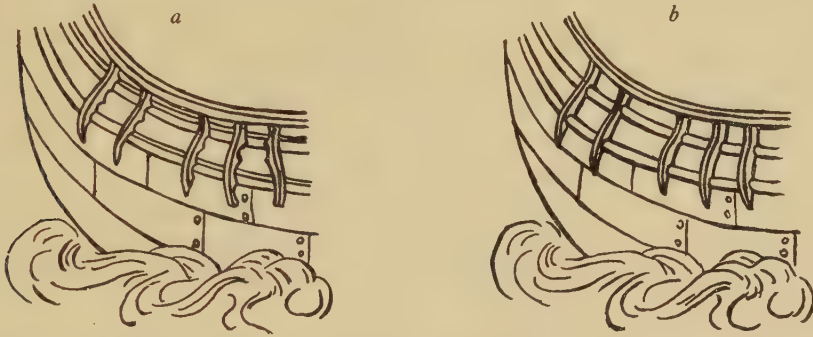


Fig. 4. Wales and skids. (a) From *Der Schatzbehalter*, German prayer book of 1491 (Paris. B.N., Rés. 2437, fol. A small photo in Moll, p. 177; sketch in *M.M.* Vol. III, no. 10, p. 313). (b) What (a) was supposed to show, the notches in the skids corresponding to the wales, actually half-round ones, from natural timber split in two.

corresponding half-round wale, but hollows and wales have been allowed to drift apart, as the knees from the chainwale in our case. One will admit that, when certain parts of the picture have begun to play truant, spreading and multiplication of errors can be expected. Multiplications, besides, are known to occur as the, likely wilful, purpose of copyists seeking to introduce some variety.

In short, while they were never universal, skids all along the hull may well have existed. To date it is not absolutely proven, although what is left of the kind in the Mataro model suggests such an arrangement. At any rate, until further enlightenment, this feature cannot be classified as either a western or a southern characteristic.

EARLY SIXTEENTH-CENTURY CARRACKS

Nearly thirty years ago I was asked to write a book telling the general reader about ships and their men. It was to include a running survey of the evolution of the typical ship, from the beginning to the modern period, when data are within anybody's reach. In collecting materials (including culling, with their kind permission, from the work of some of our senior

members), I came to realize that, for the period corresponding to the present article, there remained a blank.

From the fifteenth-century carrack to the mid-sixteenth-century one—say from W. A.'s *Kraeck* to Breughel's ships—there was practically no well known, and little makeshift, pictorial evidence available, and the classics were nearly mute.

The differences between these two types are conspicuous enough. Let us mention among the innovations: square tuck, guns in broadside ports, higher and trapezoidal after-castle, shortened forecastle, upper tier of forecastle transversally cut short (a feature come to stay, developing into beakhead-bulkhead with the later lowering of the head), bowsprit emerging from mid-height of the forecastle instead of above it, well-developed foremast and corresponding sail area.

It is unlikely that so many changes came at once; there were, no doubt, missing links. I had to go in quest of them. Many reasons pointed to Portugal for sources. (The Portuguese, in the early sixteenth century, still were the principal overseas navigators and were responsible for the origin of far-extending overseas trade.)

That country had contributed little in the past to the discovery of nautical research evidence. (I did not know, at the time, that good research work was being carried on there, practically without leaking beyond frontiers.) There was a reasonable hope of finding some stones to turn up. Various minor signs pointed to the same clue. It was plain that the Breughel ships were but partly original; in looking for copies from apparently the same source, I found several instances in which the ship, instead of receiving more or less fancy flags, had retained the Portuguese one.

Getting data from Portugal proved no expeditive business at the time. In Paris the fine Reinell charts with drawings of ships *c.* 1510 were available, but... *testis unus*... I hesitated to build upon a single piece of evidence. Finally, when printing time came I had to be content with leaving the gap as it was (and, unfortunately, as it still is, for, apart from the correction of a few errors, chiefly in the illustration captions for which the undersigned had no responsibility in 1930, the 1946 issue was allowed only as a reprint).

When Portuguese personal connexion was finally established, data readily came in, and I shall always remember gratefully the kind friends who made them available, Captains Quirino da Fonseca and Fontoura da Costa, of the Portuguese Navy, and Dr Jose de Figueiredo, curator of the Museum of Ancient Art of Lisbon. Among pieces of evidence thus collected the principal are the altar-piece from the Santa Auta church in Lisbon and a similar large panel, then in the Pauwels collection in Germany, both

showing a number of ships with fairly explicit particulars, and with which I later became better acquainted. The former was part of a Portuguese exhibition in Paris (1931) and the latter found its way to N.M.M. Greenwich (no. 4, Room 1, Catalogue of 1937). It is known, from the Portuguese archives, that the former was ordered, *c.* 1519, from the painter Gregorio Lopes (*flor.* *c.* 1513–59). The latter, which shows the same ships, plainly comes from the same school, although I do not think it is by the same hand as the drawing and painting show more minute care.

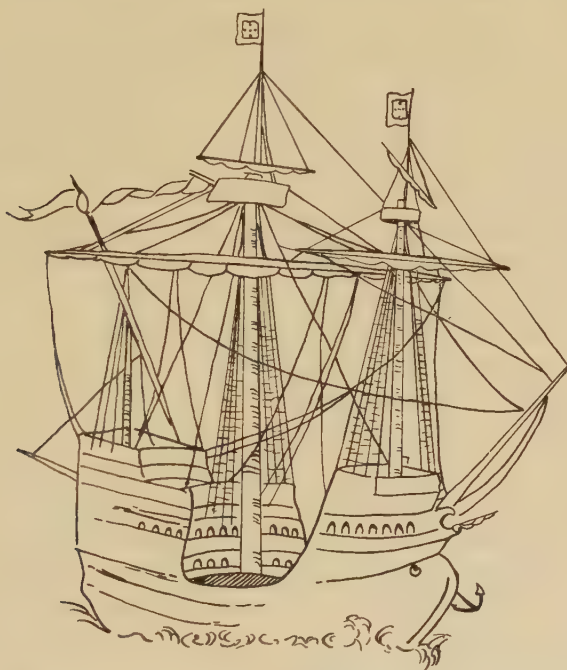


Fig. 5. From a Gregorio Lopes picture, *c.* 1519, the Santa Auta panel, Lisbon, Museum de Arte Antiga. Cf. with *M.M.*, Vol. 41, p. 295.

That Breughel's models were drawn from these pieces is plain enough. One has only to compare the central ship in the Greenwich picture with the ship in Breughel's 'Fall of Icarus' (*N. et M.* Vol. 1, p. 263), or one of the ships in the Santa Auta panel (Fig. 5) with the Breughel ship drawn by Mr Morton Nance in his fig. 23, p. 295; other no less striking instances could quite easily be found. If other proofs were required, they would readily be supplied by minor features: Breughel has faithfully reproduced the shields around the castles with the same design as in the Gregorio Lopes paintings, diagonally partitioned, white and red (or, in heraldic language: quartered saltire wise, argent and gules). Dr Jose de Figueiredo told me

that these combinations, which are also seen in some of the flags in these Portuguese pictures, were the personal insignia of the Queen Leonora.

The fact that Breughel was a copyist, instead of minimizing his value as an eye-witness of ships of his time, makes him authoritative because of the way he worked. When copying a picture of a ship, he usually alters various particulars (square, instead of round tuck, smaller castles, etc.). These alterations can be prompted only in order to bring the said ships up to date. Breughel does not like outlining figures of ships; so much can be inferred, without the help of external data, from a survey of his etchings and pictures; the same individual ships, with the same courses and same canvas, are shown again and again to save the invention of varied ones which he plainly loathes to trouble with. He was by no means alone in copying the spirited silhouettes of these Portuguese ships; the same are found, for instance, in frescoes of the Escorial, and even found their way—through how many copies?—into the works of Jacques Callot (1592–1635).

But if Brueghel was shy of designing ships conveniently water-borne and with finely bellying sails, he was not similarly hampered when it came to amending proportions and altering such technical features as were required. This he achieved to a fairly convincing degree in most of his ships. Some of them, however, he occasionally left completely or almost completely as they were in the original. Naturally enough, such ships, with round tucks (Morton Nance, fig. 22(a), p. 294), were taken, at first, for northern traders of the same shape, of the *fluyt* type; in fact they are not *fluyts*; like the ship in Mr Morton Nance's fig. 23, p. 295, they are carracks of some fifty years before, copied without alteration. This somewhat archaic presence among more modern ships gave the first intimation that Breughel was, at least partly, a copyist, drawing from older materials. But maybe he left those ships unaltered on purpose, because they corresponded to types still used concurrently with the more recent ones: there is evidence that until the first decades of the seventeenth century the Hispano-Portuguese were slow in relinquishing some features of their traditional types of ships; this may also have been the case in the middle of the sixteenth century, and there remains little probability of the point being elucidated nowadays. Be that as it may, there remains the fact that, before 1510, the Portuguese had produced a type of carrack, likely much bigger, and pretty well differentiated from the fifteenth-century one, as well as from the middle sixteenth-century (say the Breughel) one. *Circa* 1510 is the date ascribed to pieces corroborating the Gregorio Lopes pictures. Captain Quirino da Fonseca once told me that he had some recollection of a contemporary document explaining that, for the India trade, one needed ships improved on those in use before. He did not remember if these recommendations

had come in anticipation of the trade, or from the experience gained in the first yearly *armadas das Indias*; he intended to remain on the look-out for a precise reference, but, alas, he died before that purpose was achieved. In fact part of the alterations, we find, may have their explanation in the requirements of the Far-East venture.

The hull. The hull retains the general shape of the fifteenth-century carrack, with the round tuck. The gunwale remains comparatively low; in the central part, between the towering castles, is the depressed *pos* (well). The sides remain without gun-ports; the heavier ordnance is on the midship-deck, on what is very properly here the 'gunwale'. Over it is a thick protecting roof, sloping on each side of a longitudinal ridge, as in the heavier fifteenth-century carracks.

The castles. The castles have again reached greater heights, the maximum ever seen; the number of stories has increased, and each of them probably already has the large headroom which will strike Father Fournier in his description of Portuguese carracks nearly 150 years later. To avoid excessive topweight, the width of the stories decreases upwards; the transversal section of the after-castle thus tapers; for the same reason the projection of the forecastle seems shorter. This reflects a radical change in the tactical conception of the castles.

During the fifteenth century, we see the 'beak' of the forecastle increase in its altitude, in its overhang, and also in its slope to an extent which, in certain cases, approaches the possible limit. There are, no doubt, cases when some exaggeration has been made by the artist. It corresponds, nevertheless, to a real tendency, the same which moved the castles of the western post-Viking ships towards the ends, and which resulted in the beaked cog when the ends differentiated. We find here an instance of one of the oldest and most general principles of tactics—try to meet the enemy at his weak point with your strongest one. This, with thirteenth- or fifteenth-century ships, meant sticking your bows into the enemy's side. This idea of manoeuvre is well enough illustrated by the presence of the boarding grapple at the bowsprit's end. When the handling was successful, the fore-castle platform was set well above the enemy's lower part. One enjoyed, accordingly, that kind of superiority which, in shore warfare, was the aim of high walls, or, at the hands of assailants, of high, rolling towers. It was to achieve this end better that forecastles grew higher and higher, and increased their overhang. To keep top-weight within some limits, the upper platform often remained a simple one-storied affair, much narrower than its base at gunwale level. The slope, no doubt, aimed at providing maximum height for the overhanging part, without increasing too much the height and weight of the fore-castle walls.

The purposes of the castles of the Portuguese carracks of c. 1510 are quite different. From recollections of the chronicles of the Indies, I assume that these ships occasionally had to face fortified places on shore, and also to resist swarming by multitudes of people in small boats. The castles are designed as towers and fortress keeps. Hence the great height without much apparent overhang. In fact, the stems are no longer shown with a slight rake forward; they are convex, the upper part following a backward curve. The multiple-storied castle thus corresponds to a fuller section of the hull, apt to bear more weight without letting the ship down by the nose. Leaving the forecastle widely open to the rear, through the large archway seen in the fifteenth-century type, is now out of the question; the castle is intended to resist, if necessary a mass of intruders who have temporarily gained control of the low waist. Above the arch, its rear face is completely closed. Access is gained only through a door well above the deck, and easily cut by taking in the corresponding ladder (see *M.M.*, Vol. x, no. 4, frontis.). The walls of both castles facing the deck, inside the ship, are provided with a mass of light guns (as numerous as those facing the outside) which would be of use only against intruders.

The sail-plan. These early sixteenth-century carracks already embody the features of the mid-century ones as regards the conception of the sail-plan. Instead of relying on the big mainsail to provide nearly all the canvas area, the hitherto mere auxiliary sails are developed, and at least one is added to their number

The mainsail. The above solutions, however, were apparently not resorted to before the old system—of increasing the mainsail dimensions as more propellent effort was required—was carried to the greatest possible extent. These huge sails were pretty difficult to manage. In the fifteenth-century type the tacks and sheets had to be supplemented with the 'bowges', holding to the mast the centre of the bottom bolt-rope of the bonnets, as well as of the sail proper. Some extension of the method was tried. Similar ropes, to retain control of the sail and to prevent it from bellying beyond limits, were now set, no longer to the bolt-ropes only, but on each side, between the middle line and the leechrope. This had long been suggested by the cushion-like looks of occasional sails, seen from the fore, in certain Breughel copies; it is now plainly seen, from the rear, in the Greenwich picture no. 4 (fig. 6). The system probably did not prove quite satisfactory as it is not found later. It became unnecessary as the fractioning of the sail area dispensed with these gigantic mainsails.

The foremast sails. One of the striking features of sixteenth-century carracks is the sudden growth of the foremast. The foresail is no longer a tiny addition to the sail plan. Not infrequently the foremast is shown as having

reached the same height as the mainmast. Even cases of the foremast being the taller are not exceptional. One must add that this occurs chiefly in ships which look as if participating in the galleon type (see, for instance, Gaspar Correia, *Lendas da India*, printed Lisbon 1859, view of Aden c. 1525); the Portuguese *galeao* of the time embodied features from latin types, galleys and/or enlarged caravels. In many cases the height of the



Fig. 6. Sixteenth-century Portuguese ship, likely the *Santa Catherina de Monte Sinay*. From a picture of c. 1521. Formerly in a Lisbon collection, sold to German buyers in 1911, now in N.M.M. Greenwich, Room 1, no. 4 (summary outline.)

foremast has plainly been exaggerated by the artists; various drawings, among the much-copied pictures of these ships (Fig. 5; Morton Nance, fig. 23, p. 295) show the foremast with a diameter substantially smaller than that of the mainmast, a difference which would not likely have originated in the artist's imagination, and which would not have existed had both masts been of about the same height. Portuguese pictures about the middle of the sixteenth century still show ships with a foremast substantially shorter than the mainmast, among others where the difference is much smaller. The probability is that, for some time, individual builders' ideas were at variance as regards the arrangement of sail-plan. (The same notion is conveyed by the occasional appearance of the so-called bonaventure, the fourth mast with an additional lateen mizen; I shall not say more about this mast, the existence of which seems to have remained optional and never to

have been a characteristic feature in a classification of ship-types). It remains, anyway, that the sudden growth of the foremast is one of the innovations of the early sixteenth century. When Senhor J. de Silva, the sculptor, and Admiral Gago Coutinho (of South Atlantic air-crossing fame, besides his interest in old ships) were pleased to have me discuss the ship of that time which is now seen on the Portuguese coins, I advised a possibly exaggerated, tall foremast, as a symbol of the part then played by the Portuguese in the transformation of the ocean-going ship. (Another suggestion that the Portuguese were especially interested in increasing the surface of the foresail is based on the fact that, at a later date, the first bumkin-like spars appear in documents of Portuguese origin.)

The topsails. The foremast sail-area has been increased not only by the dilatation of the foresail, but also by the addition of a topsail. The first instance of a fore-topsail on record, as far as I know, is found in an illuminated MS. belonging to Lord Hastings (Anderson, pl. VII, p. 120). I do not know if the date is more than conjectural; at any rate in the material at present available a fore-topsail in 1450 remains an isolated forerunner. The first mass appearance takes place with these carracks of c. 1510.

Another change has been introduced: the topsail, fore or main, is no longer properly 'the sail in the top'. Its braces still go there, but tack and sheet now go to the lower yard arms. They are not brought very close to the lower yard; this comes later, as is shown by a comparison, for instance, of the Greenwich carrack (Fig. 6) with the Breughel corresponding one.

The Mediterraneans seem to have been late in accepting that improvement of the topsail. The Italians first tried to achieve the same purpose of increasing the sail area above the main-yard by another system: the addition of triangular raffee-topsails between yard and top (Morton Nance, figs. 14 and 15, pp. 285 and 286). It would be interesting to know if this was a distinct invention, as was likely the case with the raffee-topsails, the *ails de pigeon* of the nineteenth century, or if it was a revival of the *supparum* of the ancient Romans; the practice may well have survived through fifteen centuries in some local minor craft but was overlooked by the artists who are more addicted to showing the typical big ship of the time.

This practice was probably not very widespread and did not last very long in big ships, as it is seldom shown in pictures.

I do not remember any of those Portuguese ships showing the topgallant-sails which are occasionally found in Breughel's. In fact, until fairly late into the sixteenth century, when they begin regularly to appear at the main-mast, they are hardly ever seen outside those questionable pictures where, through the multiplication of yards, tops, etc., the artist wants to convey

the notion of an extra-huge ship phenomenon; at any rate they remained exceptional.

It seems that this type of Portuguese carrack was adopted in most western seafaring countries. By the way, these words 'Portuguese carracks' call for an explanation. Captain Quirino da Fonseca once held that his country never used *carracks*. Having discussed the matter, we agreed that the situation was as follows: the Portuguese actually used in the fifteenth century, and elaborated in the early sixteenth, what various foreign languages called *carrack*, *carraque*, etc., but they called them *naus*, very seldom, if ever, using the name *carraca* for their own ships.

That the type spread to the very north is shown, for instance, by frescoes of c. 1525 in Danish churches (Voldby, Moll K c 110, or Udbyneder, *N. et M.*, Vol. 1, p. 270). The difference is that such ships invariably show a square tuck; the round tuck is not to be found, to my knowledge, outside pictures of Portuguese origin. In what region did the change appear first? I do not think one can tell from the material now available. It seems to have been fairly simultaneous in all regions.

Although they adopted this type of carrack, most European countries soon altered it, correcting what to-day still looks somewhat excessive, by reducing the height of the castles or/and raising the waist. Top-hamper had no reason to be retained where it was not required by the conditions of the venture. The increasing part of gunfire, at the expense of boarding, in naval warfare may also have led to these alterations.

Alterations which had taken place outside Portugal did not fail to come back to that country, where about mid sixteenth century ships are showing the square tuck and the tier of broadside gun-ports, just as abroad. Then, once more, the typical ocean-going ship had reached a pretty uniform pattern, the progressive elaboration of which into the modern sailing-ship is now reasonably well known.

APPENDIX

Abbreviations and references

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THE *ALBANAISE* AFFAIR

By J. D. Spinney

THE stories have now been told¹ of the mutinies on board the *Hermione* and the *Danae*. Such episodes, with their deplorable sequels, the delivery of the vessels to the enemy, are so rare in the history of the Royal Navy as to be almost unique; but it so happens that there was a third, which, because it follows so soon after the other two, should perhaps be told as well. Happily it is the last, and having told it the writer hopes never to return to the disagreeable subject of mutiny again.

The *Albanaise* was not a very important ship. She was a bomb-ketch which had been captured from the French in June 1800² and bought into the Navy. Her commanding officer, Captain Francis Newcombe, master and commander, was a tough west-countryman with high professional qualifications, but his ship's company seem to have been very poor indeed. All told, the *Albanaise* had a complement of between forty-five and fifty, and probably the only officer of any ability besides Captain Newcombe himself was the gunner. Escort duty in the Mediterranean, despatch carrying, and any odd jobs had been her lot since she commissioned, and when our story begins she was plugging westward from the North African port of Arzeu, with a convoy of seven merchantmen laden with cattle and barley for the Gibraltar garrison.

On the night of 22 November 1800 the little convoy fell in with a small Spanish vessel which Captain Newcombe promptly captured. She had a crew of eight, and these the captain took on board the *Albanaise*, replacing them with four of his own men under the master's mate, Mr John Terrel, who was instructed to carry the prize into Gibraltar. This done the convoy continued on its way against the fresh westerlies.

Twenty-four hours passed, and as evening fell on the following day Captain Newcombe, a careful and experienced officer, became uneasy about the eight Spanish prisoners. The coast of Spain was not far away, and there were already too many Latins of doubtful loyalty among his own crew. It would be wise to take a few extra precautions and so, before turning in, he gave orders that the officer of the watch should be armed, that a sentry be posted on the main hatch, and that not more than one of the Spaniards be

¹ *M.M.*, Vols. 41 and 42.

² She was captured by H.M.S. *Phoenix* on 3 June 1800 off Cape Feno, while bound from Toulon to Corsica.

allowed on deck at a time. He then retired, leaving the deck to Mr Joseph Donovan, a mature midshipman of twenty-eight, who had the first watch. So the darkness closed in on a blustery night, with the *Albanaise* under double-reefed topsails, and the convoy wallowing along astern at about four knots.

Shortly after midnight Captain Newcombe woke up. Someone was in his cabin, several people in fact, and they were whispering together. For a moment he puzzled over the problem and could only conclude that it must be his servant, who had been accustomed to tend him at night during his recent illness. So he called out: 'Hay, Hay. Is that you?'

Instantly the whispering ceased.

Again the Captain called out, and then, as he stirred to move from his cot another noise came out of the darkness, the unmistakable clash of steel drawn across steel, and then a voice in bad English: 'Captain, if you don't lay still you are a dead man.' There was a moment of silence, and then another voice took up the menacing theme: 'Captain Newcombe,' it said, 'if you cannot behave like a gentleman and lay still, we'll have life for life.'

The first voice the captain had failed to recognize, but there could be no mistaking the second speaker. He was Jacob Godfrey, the ship's steward and corporal.

Captain Newcombe lay very still indeed. He could not believe that the whole ship was in the hands of mutineers—not yet at any rate, and, resolute man of action that he was, he decided that his best course would be to fight his way out and raise the alarm. In the inky darkness he could move with confidence around his tiny cabin—which the intruders could not—and on a locker beyond the table lay his sword and a brace of loaded pistols. For a moment longer he remained passive. The *Albanaise* was still lying over on the port tack and there was not a sound from the deck above. Then he dived from his cot and under the table.

As he had anticipated, his adversaries plunged forward blindly with their weapons towards his empty cot. Before they could disentangle themselves he had a pistol in each hand (there was no time for his sword), and he made unerringly for the cabin door. A third man was standing just inside it. Instantly the captain placed a pistol to his breast and killed him on the spot. A moment later he was outside, yelling at the top of his voice: 'Hands on deck: where is the officer of the watch?'

There was no response: the decks were silent and deserted, and before he could attract any attention, before he could even gain the poop, his adversaries were on him with tomahawk and cutlass.

'You vagabonds,' he shouted, 'what do you mean by all this?' And as Godfrey grappled with him he presented his second pistol and pulled the

trigger. There was a snap as the weapon misfired, and as he struggled desperately Godfrey hissed in his ear: 'Everyone is secured: no one can assist you.'

Little Captain Newcombe cared. Furious and bewildered he fought back, doing his best to wrest Godfrey's tomahawk from him, and getting badly cut about the fingers in the process. But the odds were too great. He was single-handed against four or five assailants and becoming exhausted. As his resistance weakened he was dimly aware of some of his officers trying to reach the deck by the main-hatch, and of a musket being fired. Then, having done all that a man could do, he was borne down and overpowered.

Meanwhile, what of the officer of the watch? The regrettable truth is that when Captain Newcombe emerged on deck and shouted for him, Mr Midshipman Donovan was already lashed to the bowsprit bitts on the star-board side, and under guard. He had relieved the gunner at 8.10, belted on a cutlass in conformity with the captain's orders, and until midnight his watch had passed uneventfully. Then he had gone to mark the log slate at the binnacle light, and as he was returning from this task three men, Jacob Godfrey, Henry Richards and Hugh Keenan, had closed round him and seized him by the arms, while at the same time a quick-fingered Italian, Francisco Cassaline (Captain Newcombe's sentry at the main-hatch as it happened), snatched his cutlass away. They then marched him forward to the bitts, threatening him with instant death if he dared to cry out, and Richards had remained on guard while the others went below to deal with the captain. The latter, as we have seen, was made of sterner stuff than his officer, and Keenan had been the victim of his first pistol.

This shot, and the tumult on deck which followed it, must have roused the whole ship. The first lieutenant, Mr Kent, and the gunner, Mr Lewin, turned out at once and made for the deck, both under the impression that the Spanish prisoners had broken loose. Mr Kent, first to reach the ladder, was surprised to find the hatch blocked with boats and gratings, and a sentry barring his way. Still labouring under his delusion about the prisoners he entered into a rather futile argument with the sentry (another Italian by the way called Volcanti), the burden of which appears to have been: 'You fool, don't you know me?'; which he kept repeating as he peered up through the grating. Mr Lewin, the gunner, though no clearer in his mind as to what was going on, was more resourceful. Disdaining to argue with the olive-skinned miscreant at the top of the ladder, he began to make his way up by the cable, shouting cheerily as he came: 'Stop my boys! Let us come up and we'll soon clear the decks of them.'

These brave words seem to have alarmed the mutineers and persuaded them that a substantial counter attack was developing from below. 'They

have got arms', cried someone. 'Fire, fire', shouted another, and a musket was presented down the main-hatch which missed the first lieutenant, but got the gunner in the thigh. With this the activities of the spirited Mr Lewin were brought to an end. All he could do was crawl painfully away toward the surgeon's cabin while Mr Kent, vocal and ineffectual as ever, cried out to his commanding officer, whom he could just see beyond the grating: 'Captain Newcombe, Captain Newcombe, the gunner has been shot.'

This was the end of any resistance. The other men who were below lacked the spirit or the inclination to support their officers, and the next episode in the night's proceedings was the release of those eight Spanish prisoners whose dangerous potentialities had so impressed all the officers of the *Albanaise*, from Captain Newcombe downwards. The poor men had had no idea of what was going on, and came up on deck most apprehensively.

Probably the mutineers had intended from the first to make for a Spanish port. Anyway, it was not long before the *Albanaise* eased her sheets, turned away from the convoy, and headed for the coast. The indomitable Captain Newcombe, still bleeding from his wounds, swore, he would be cut in pieces rather than submit to the indignity of being put in irons, so they dragged him below and lashed him to one of the guns in his own cabin. Then Mr Kent was brought in and lashed to the other gun. Between them on the floor lay the dead body of Keenan, and at intervals through the night Godfrey or Cassaline would scowl in through the doorway and remark to Captain Newcombe: 'In a few minutes we will serve *you* as you have served that man.'

Godfrey, whom the mutineers frequently called 'captain', seems to have passed the night in a mood of exalted ferocity. He announced repeatedly that Captain Newcombe was to receive four dozen lashes in the morning, 'to see how he liked it', and went several times to warn the surgeon that he would be expected on deck at daybreak to attend him. Grievances were ventilated too: 'You know, captain,' said Godfrey on one of his visits, 'the bounty is not paid, and we have no shoes on board',¹ to which Cassaline his faithful understudy added: 'Neither have we butter or cheese.' However, when daybreak came the only ceremony that took place was the burial of Keenan. Godfrey ordered some muskets to be fired 'as he had died in a good cause', and once again threatened to serve Captain Newcombe in the same way for presuming to resist when there were so many against him. But the gallant captain continued his resistance, even though his arms were still bound. Through a loyal hand called Brady he contrived to have some

¹ Vol. 2 of the *Keith Papers* reveals that there was strong feeling in the fleet at this time about shoes.

muskets loaded, and some of the crew sounded about a counter-attack. He even managed to ensure that the two signal books with the private signals were thrown overboard. But Brady could enlist no support and was soon in irons himself; and that evening the mutineers dropped anchor off the port of Malaga.

The Spaniards were pleased, if surprised, to see the *Albanaise*, but rather perplexed what to do with her. Captain Newcombe, however, had no doubts about what should be done. From the first he took a high line. He insisted that his ship should be released and allowed to resume her voyage to Gibraltar, on the grounds that he and his officers had not surrendered to the mutineers but had been overpowered. He invoked what he called 'The Maritime Laws of Great Britain' with a number of very questionable precedents, but his bluff (for it was nothing more) left the Spanish commandant unimpressed. He would refer everything to the Spanish Court at Madrid: in the meantime the entire ship's company of the *Albanaise* would have to come ashore and perform quarantine in the local prison.

From here Captain Newcombe wrote to the commandant, setting out his demands afresh, and telling him exactly what he should say to the court at Madrid. He wrote also to the British ambassador at Lisbon regarding certain Portuguese among the mutineers. He made lists of all the men actually seen under arms, and lastly he wrote a long official report to Lord Keith. This concluded with a very remarkable statement. He had, he said, presumptive proof of the intentions of Mr Terrel, the master's mate (sent away in the prize), to head the mutinous party. He therefore requested that he might be secured as soon as he arrived at Gibraltar.

The officers and the loyal hands of the *Albanaise* did not have to wait long for their release, but when they reached Gibraltar (without their ship, needless to say), they found that the fleet had sailed for the other end of the Mediterranean with Abercrombie's army, and they had to follow as best they could. So it came about that the enquiry did not take place until 17 June 1801. It was held on board H.M.S. *Kent*, against the highly dramatic background of the Bay of Aboukir and the Egyptian operations, then approaching their climax. Rear Admiral Sir Richard Bickerton presided over a most distinguished court.¹ The fact that the *Albanaise* affair had been so uncomfortably reminiscent of the trouble on board the *Hermione* and the *Danae* made the occasion one of special significance.

Mr Midshipman Donovan was the first witness, and when he had told his rather sorry story he was closely questioned on the possible origins of the mutiny, and conditions on board the *Albanaise*. He was quite sure, he

¹ It included Cochrane of the *Ajax*, Martin of the *Northumberland*, Louis of the *Minotaur*, Sidney Smith of *le Tigre*, and Blackwood of the *Penelope*.

said, that there had been no previous warnings or indications of what was afoot; no tyranny or oppression by Captain Newcombe or any of the officers; no previous complaints by the crew about anything. The worst that he could say about the ship's company was that they were, generally speaking, an indolent lot. 'Being foreigners', he explained, 'they pretended not to understand anything said to them.'

The court then came to the question of Mr Terrel the master's mate, against whom Captain Newcombe had made such a serious allegation, and interest must have quickened as Donovan told what he knew. During the short time that they were all together in the Spanish prison he had got into conversation with the mutineer Henry Richards. This man had been in a communicative mood, and he had confided to Donovan the interesting fact that the mutiny had been planned for the night of 22 November when Mr Terrel would have led it: Captain Newcombe and the officers were to have been set adrift in a boat, and as many of the convoy as could be manned were to follow the *Albanaise* into Malaga. This plan had been upset by the encounter with the Spanish merchantman and Mr Terrel's departure as prize-master, but only for twenty-four hours, as Godfrey had stepped into the breach. This (whether true or not) was all that Donovan had been able to learn from Richards; but he added on his own account that the master's mate could speak Portuguese, and had been heard to converse with some of the foreigners on board in their own language.

Having picked up this promising scent the court proceeded to examine William Prosser Kent, late first lieutenant of the *Albanaise*, but here it met with a most unexpected check. Mr Kent refused to give his evidence under oath. His conscience would not permit him, and nothing could persuade him otherwise. Baffled, the court called Mr Lewin the gunner instead, and proceeded to glean what information it could from him. Did Mr Lewin think there was anything suspicious about the behaviour of Mr Terrel? Yes, Mr Lewin did. He was often drinking with Godfrey, and was very intimate with Volcanti. Details followed of two occasions when (it was alleged), Mr Terrel had intended to take a boat and desert. Most significant of all was a remark made by Godfrey on the day after the mutiny, that if the prize had not been taken that night *someone with more command than himself* would have had the principal hand in it.

Thus encouraged the court made a second attempt to persuade Mr Kent to speak, but without success, and the proceedings ended with an examination of the late surgeon of the *Albanaise*, who had nothing material to add.

The case was now as clear as the court wished it to be at this stage, and as Sir Richard and the ten captains had their dinners waiting for them, and another case to try that afternoon, it may be supposed that they reached

their verdict without undue delay. Stripped of their stately verbiage the conclusions were as follows: '...that the conduct of Captain Newcombe was highly spirited and officerlike...that Mr Lewin the gunner was active in obeying his captain's orders until he was badly wounded...that the other officers, being surprised, were incapable of resistance.' So Captain Newcombe was honourably acquitted, and the behaviour of Mr Lewin highly approved. But there was a sting at the end of the verdict. 'And the court, having reason to believe that Mr John Terrel, although absent in a prize at the time of the mutiny, was privy to the intention and did not reveal it, doth recommend a future enquiry into (his) conduct; and Lieutenant William Prosser Kent, having in the course of the trial refused to give his evidence upon oath from mistaken religious motives, the court is of opinion that he is unfit to hold a commission in His Majesty's service.'

So the trial ended, and the reader may well ask: 'But what about Mr Terrel? Did he arrive at Gibraltar with the prize, and if so what was done about him?' The answer is that he sailed innocently in to Gibraltar on 25 November and remained at large until Captain Newcombe's letter was received, when he was arrested. This was on 10 December. He was taken to Alexandria, and was at hand when the court sat on 17 June 1801, but was not brought before it. Instead, the order was made that he should be detained for the purpose of further enquiry, which meant of course until better evidence turned up than the unsupported statements of Mr Lewin and Mr Donovan. So detained he was, while the authorities waited hopefully for more mutineers to be caught.

It was a most unsatisfactory state of affairs, and became all the more so as the weeks and months went by without any new developments. Should Mr Terrel be brought to trial at this stage he, the possible ringleader and arch-villain, would almost certainly be acquitted. The naval authorities preferred to wait, and the rest of the year went by without any new evidence coming to light. Mr Terrel, meanwhile, remained a prisoner at large, in a succession of ships, and did his best to recover what credit he could by participating in such small-craft actions as he might; and according to several captains he showed himself a most zealous and meritorious officer, taking part (unofficially as it were) in upward of thirty actions with gunboats, and cutting out expeditions in enemy ports.

Then in January 1802, while Mr Terrel was still in the Mediterranean, Godfrey was caught. Of his guilt there could be no doubt. He was brought to trial at Sheerness and met the fate he deserved, but if the authorities were expecting any new evidence to come up concerning the master's mate, they were disappointed. Godfrey revealed nothing, and the only new fact to emerge was provided by the late clerk of the *Albanaise* who had gone with

Mr Terrel in the prize. He remembered that when they were entering Gibraltar Mr Terrel had commented on the way the *Albanaise* had disappeared, and said he was afraid there might be something the matter with her. It was suggestive: but no more.

In March 1802 the unfortunate master's mate arrived at Spithead on board the frigate *Penelope*. The war was over, temporarily, and he was transferred from ship to ship as they paid off, all the time soliciting an enquiry into his conduct, and receiving a curious mixture of suspicion and sympathy from the officers with whom he associated on such equivocal terms. He had now been a prisoner at large for over a year, but Godfrey had gone to his fate with his lips sealed, the man Richards, who had been the first to implicate him, had not been caught (and, so far as can be discovered, never was), and so the Admiralty remained obdurate. His case was fast becoming something of a scandal, and at last, on 19 June 1802, nearly eighteen months after his arrest, he was brought to trial on board H.M.S. *Donegal* in Portsmouth Harbour.

He was charged with 'knowing and not revealing the intention of the mutineers, and for making or endeavouring to make mutinous assemblies on board the *Albanaise*', and the evidence against him was feeble in the extreme. In his defence he pointed out that had he wished to escape to Spain it would have been perfectly easy to have done so from the prize, instead of which he had turned up with her at Gibraltar. This must have told strongly in his favour.

Captain Newcombe was called, and after the allegations of Richards had been recorded the prisoner asked him: 'Have you any other reason for thinking me concerned in the mutiny?' to which the captain could only reply: 'No'. Here the prisoner should have stopped. The point had been made and it was a good one. But, overconfident perhaps, he then asked his former captain: 'What was your opinion of my character, previous to the mutiny taking place?' Captain Newcombe replied blighting: 'Not that of a very diligent officer.'

It was enough, it was more than enough, to destroy the whole atmosphere of injured innocence and a good man wronged, which was beginning to work in the prisoner's favour; and it may have recalled to the court Mr Lewin's damaging remarks about him during the first enquiry. In vain did Mr Terrel try to recover the ground he had lost with a last, carefully prepared, speech, a speech calculated, as no doubt it was, to wring pity from the stoniest breast. '...and upon the mere assertion of the basest of villains', he declaimed, 'I have been deprived of my liberty for upward of eighteen months, held up to my country in the infamous character of a mutineer, and lost, not only that which is most dear to every man, my

character, but all chance of promotion in that service which it was my pride to have embraced, and my inclination to have followed.'

Fine words, but they ring somewhat hollow against Captain Newcombe's unflattering opinion. It is clear that Mr Terrel did not impress the court, and instead of the honourable acquittal which he confidently anticipated, he was discharged with the damning verdict: 'Charge not proven', and so disappears from the scene. The *Naval Chronicle* said at the time: 'The case of this young man is extremely hard.' Others may hold a different opinion.

And this is virtually the end of the affair. A few more of the *Albanaise* seamen gave themselves up to the authorities and were treated leniently, but none of the foreigners was caught. As for the gallant Captain Newcombe, the reader will probably be glad to know that the loss of the *Albanaise* did not end his seagoing career. After covering himself with glory under Cochrane in the Basque Roads, he had the honourable distinction, in 1815, of bringing home from Halifax almost the last prize of the war, the captured *Chesapeake*.

Sources

Four volumes of court martial records in the Public Record Office provide most of the material. These are:

- Adm. 1/5356. Captain Newcombe and officers of the *Albanaise*.
- 1/5360. Jacob Godfrey.
- 1/5361. John Terrel and others.
- 1/5362. Other mutineers.

Also:

- Adm. 36/14126. Muster Roll, H.M.S. *Albanaise*.
- 51/1404. Captain's Log, H.M.S. *Phoenix*.

Printed sources

- The Keith Papers*, Vol. II (N.R.S. 1950).
- Naval Chronicle*, Vols. 6 and 8.

THE BOATS OF EAST PAKISTAN A PRELIMINARY STUDY

By Basil Greenhill

(Continued)

WITH DRAWINGS BY CICELY HILL

The life of the boatmen

THE sails of an East Pakistan river boat, like those of a modern motor schooner, are an auxiliary means of propulsion, the wind a welcome occasional help to provide breaks, sometimes long breaks, in the drudgery of rowing, sculling, poling and towing.

The boats of East Pakistan are all single masted. In all but the smallest boats the masts are stepped in a tabernacle, the twin beams of which sometimes, as in a big *pallar*, stretch upwards for half the height of the mast (Fig. 14). The mast pivots on an iron pin and there is no counterweight. The masts are almost always made of rough hardwood poles often by no means straight, and often with the bark still on them.

The rig of all the river boats is either the squaresail or some variation of it, or the spritsail. The yards of the smaller boats are rough hardwood or bamboo poles. Those of the larger are made up of two or more poles lashed together. The proportions of the sails vary from district to district and from boat type to boat type, but boats of the same type from the same area usually set sails of the same shape. The Dacca *pallar* usually sets a deep squaresail with a narrow topsail above it. The large fishing boats of the Padma have a square-cut spritsail.

Rigging is very simple and is made up from hand-twisted jute rope. There are no permanent stays. Often there are no more than two braces (or sometimes a single brace rope, yard arm to yard arm, passing through a notch in the goloi at the stern) and the halliards, sometimes led aft as backstays. Bigger boats have two backstays set up with tackles. The yards are not fitted with pannels but hang from the halliards drawn up tight to blocks to the front of the mast. No jibs or auxiliary sails of any kind are used. Sails are never reefed, and there is no provision for reefing them, though I have occasionally seen a bonnet in use laced to the foot of a squaresail that had been made to take it. Many of the larger boats carry a shallow topsail above the squaresail but never a topgallant sail. Sometimes the foot of the

topsail is laced to the lower yard so that it has to lie loosely aloft when the topsail yard is lowered and both sails have to be set together. I have occasionally seen a third yard used, bentinck boom fashion, to extend the foot of the lower squaresail.

The masts of the river boats are almost invariably stepped forward of amidships, usually at the fore-end of the *chauni*. Only one type of East Pakistan boat, the *jhong* of Mymensingh, mentioned above, seems to carry her mast in the middle, and the fact that they do so provides a means of recognizing the Indian up-river boats from the Ganges at great range. Small sprit-rigged *dinghys* sometimes carry their mast right aft in the way shown on fig. 52 on page 242 of *Water Transport*, but they are not very common in Pakistan.

Sails are made of light cotton material. They are often patched and mended or sometimes left with great rents in them. I have seen boats sailing with more holes than sails between the bolt ropes. The sails are often made with alternate vertical strips of black and white or red and white material. Sometimes white sails are patched with coloured material, and I have seen sails all red, all blue and all green in colour.

Spritsails are often square or rectangular in shape and a half sprit is often used. The absence of shrouds makes possible a great variety of positions for the squaresail. Not merely is it swung from a square to a completely fore and aft position, but the position of the halliard on the yard is shifted so that in some boats at times the sail is used like a dipping or even a standing lug in an off-the-wind position. Long narrow boats like the fast passenger-carrying *ghazi* (Fig. 15) set their squaresails in this way to sail a course in light weather which may be almost a reach.

But it follows from the design of their spoon-shaped hulls and from the loose baggy cut of their full bellying sails that none of the boats ever sail to windward and indeed the whole idea of windward sailing is foreign to the river boatmen. I heard a story once that leeboards were being used by boats in a small area south-west of Dacca, and I even heard the name given to these boards, which translates from Bengali appropriately enough as 'sail-board'. But the story was vague and second hand and I was never able to confirm it.

Since she cannot sail to windward, and since at some seasons the winds tend to blow for weeks in one direction, the river boat must often furl her sails and lower her mast (a process which effects a change in her appearance as sudden and as complete as that made by the folding of a seabird's wings) and proceed by some other means. She may be towed, she may be rowed, she may be poled, if she is not of the largest size she may be propelled by that twisting sculling motion of the steering oar or oars at which the Bengali boatman is uniquely skilful.

The most spectacular of these methods of propulsion is towing. Because of the obstacles on the banks of the rivers, and the necessity of clearing the masts of smaller boats inshore, boats are always towed from the mast head. The tow lines of light, thin, strong jute rope are fastened to a yoke which is hauled aloft at the end of the main halliard. To take the strain of the tow the running back-stays are set up tight. One, two, three or even four men go ashore with the ends of the lines. Each man holds diagonally across his chest with his left hand a short thick bamboo, often decorated with a design picked out with a hot iron, to the shoulder end of which the towing line is attached. A second line is secured to the main towrope a few feet behind his head and he holds a bamboo grip inserted into a loop at the end of this second short line. He usually carries this loop at shoulder height.

Each man leans to the tow in silence and strides forward at a good pace. The men walk in single file, separated two or three yards from one another. Boats under tow move surprisingly quickly. So shallow and well shaped are many of them that one man aided by the sculling paddle on board can tow a big *ghazi* as fast as he can walk. Every river has its towing path wandering up and down the bank, high up under the edge of the jungle, down to the margin of the water amongst the fields of rice. Whenever they come to a break in the bank or to a big settlement that goes right down to the water's edge each man carefully rolls up his line and the boat is rowed to the next section of the path.

In East Pakistan boats are almost invariably rowed by men standing or sitting in the bow half of the boat (Figs. 12, 22). I once saw men rowing a peculiarly painful quick stroke, rising to the feet on the forward stroke and falling back into a sitting position on the gunwale on the pull. The usual sitting position is on the gunwale itself and the oarsmen work on the open deck forward of the bamboo cover and are not sheltered from the monsoon rains. In a few boats, notably a group from the Khulna district, the oars are amidships and are worked by men sheltered under an open-sided section of the *chauni*. In the largest boats two men may work at the same oar. The largest boats, the *jhongs* and the boats from the upper Ganges, are rowed by men standing on top of the *chauni*.

Instead of rowlocks or pins, oars are often worked on a triangular frame to which they are lashed. In small boats and in even the largest of the more lightly constructed boats the main means of propulsion is the twisting motion of the steering oar with its broad blade, long loom, often decorated with bands of polished brass, and its short tiller handle. The Bengali is a master of the use of this device and it is only in the heaviest types of boat that the steering oar is developed into a kind of semi-balanced rudder pivoted vertically on the quarter. I have never seen a stern rudder on any of

the East Pakistan river boats. Many boats from the areas where the rivers and lakes are shallow are fitted with poling trackways on either side and are rowed only when on long voyages to the deeper streams.

The master-boatmen, who are called *mahnjis* as near as the sound can be reproduced in English, and the hands, who are called *mahlas*, are most skilled in the use of tides and river currents. These aids to propulsion are utilized to the utmost. At times oar and squaresail may be no more than a means of keeping in the moving water, or moving from one stream to another. The tides are played with the greatest skill in the lower delta of the Brahmaputra, where the labyrinthine waters of Backerganj and Khulna can provide to the boatmen who know them well an almost unbroken succession of favourable streams. Boats move a good deal by night, often in small convoys for mutual help in the event of difficulty, and it is under these conditions that the boatmen's skill in pilotage is shown at its best.



Fig. 22. Rowing a big *pallar*.

The crews of the bigger boats live for months aboard their vessels. They sleep on the boards of temporary decks, brought to a fine polish with many years of cleaning, or, in the fast passenger-carrying *ghazis*, on racks slung from the bamboo cover while their passengers take the deck beneath them. They cook and eat under the same *chauni*, which in the bigger boats provides a spacious and comfortable shelter and compares with the tidy houses in the villages where each man has his home and family. Food is cooked in metal pans on an open fire and hurricane lamps provide light in the evening. The risk of fire is always present and other disasters are distressingly frequent. The sudden storms of March and April are among the most

savage and the most spectacular in the world. There are other forms of natural peril. I have heard of a boat picked up and carried 100 ft. into the air by a waterspout on the broad river south of Narayanganj. River pirates still operate in the less accessible parts of the delta and regularly pick out their craft for looting. Cargo thieves operate in the crowded roadsteads and at the quays. Though the boatmen have an astonishing immunity to tropical diseases and can drink with impunity water from a crowded roadstead that would be lethal to a stranger, every year dysentery and the endemic cholera of this region take their toll.

But the boatmen live a simple and in many ways a healthy life. They are strong and hardy. They have an old culture, rich especially in folklore, and their songs, at first difficult to the European ear, are very expressive of the life of the great rivers and the hot fertile land. At certain times of the year, notably at Dacca on Pakistan's national day, the boatmen gather together in their thousands to watch the racing of the long narrow *chiips*, specially built long narrow boats without overhangs, some of them 70 or 80 ft. long and paddled by crews of 100 men. On these occasions the river is lined for miles with crowded cargo and passenger boats, decked with flags and filled with cheering crowds of boatmen.

There is a type of boat for every kind of trade. The smaller cargo boats of Sylhet are so shallow that their crews can walk around them only knee deep, though the boats are full of heavy cargo. At the end of the dry season, when the small rivers are little more than chains of pools, the crews of these small boats dig out the channel in front of them with a two-man dredge shaped like a great shallow spade.

Small boats when heavily laden sometimes have their bulwarks raised with a low wall of mud built upon a foundation of bamboo laid upon the gunwale. Such a boat, heavily laden with firewood or bamboo, may be almost completely submerged. Her *chauni* is removed and placed on top of her mound of cargo, and here her crew live during a short voyage. A bigger boat may have a cargo of pots stowed in a framework built out on either side of her so that the *chauni* runs like a tunnel through the mass of cargo. This framework may stretch 6 ft. over the water on either beam and, to check her rolling, a boat loaded in this fashion often has buoyant plantian stems secured on either beam.

Cargoes of big heavy timber are carried in the most ingenious fashion. Logs of moderate girth and weight are secured athwartships, jutting over the sides of the vessel for the great part of their length. Heavier and longer timbers are suspended parallel with the boat's keel afloat in the water beneath them, so that the boat is lost in a great square of floating timber several times her own size. Stowed in this way a river boat can move many

times her own weight of timber in a single load. The whole assembly of timber and boat is moved by the sail, or by oars from the outermost logs. Clumsy and unhandy though a vessel loaded in this way is, she is still more controllable, and reaches her destination sooner, than a raft. It is also questionable whether a raft could be made from the immensely heavy logs of *sal* wood, denser and stronger than teak, which float, if they float at all, just below the surface of the water.

The great majority of the boats of East Pakistan are decorated with oculi of one form or another and many have these devices on both bow and stern. They vary in completeness from the painted eyes on the stern *golois* of many *lakhai* to a few brass strips or studs. Boats are often gaily decorated with bands of big-headed brass or silver studs. These, 1 in. or even 2 in. in diameter, are nailed in bands around the sections at intervals sometimes of as little as 18 in. *Golois*, and sometimes even steering oars, are decorated in the same way.

Some boats are tarred, some are left with planks unprotected, some partly varnished. In those which have wooden houses in place of the bamboo *chauni* the side panels of these houses are often decorated in gay colour. A favourite form of decoration on side panels is the silhouette of a hand which has been dipped in coal tar.

(2) THE SEA BOATS

Classification

The sea boats of East Pakistan differ from the river boats in that they sail across the open bay of Bengal from the Chittagong coast to the delta during the season of fine, calm, winter weather. They all come from the south-eastern districts of East Pakistan, the districts which have a coast facing the open Bay. They can be divided by the systems on which they are constructed into two groups: the first group, like the majority of the river boats, uses squaresails, but they are cut more flatly, without the soft belly and are of tougher material, and these boats can and do sail to windward. The bigger boats of the second group are rigged with a kind of lateen, and they too sail to windward. By construction the two classes are as follows:

(i) Dugouts and plank-extended dugouts and the plank-built imitations of them. All the boats with planks in their construction are edge joined in one way or another.

(ii) A group of flat-bottomed, hard-chined, transom-sterned boats built of edge-joined planks and which, from their general appearance, embody Chinese influences. These boats are known locally as the 'Chittagong Sampans'.

Group (i). Dugouts and plank-extended dugouts

The cargo-carrying dugouts are known by the general term *saranga*, the largest of them as *kuda*. They are cut from single logs, hollowed out until only the equivalent of a thin planking, 1 in. or 1½ in. in thickness in the largest craft, which may be 60 or 70 ft. long, is left. The hollowing is done with fire and adze. Before the hollowing is far advanced shallow holes are drilled from the outside of the log to the depth the planking is required to take. The hollowing process stops when the inside ends of the holes are reached and the holes are sealed with wooden plugs. Dozens of these holes pock mark the outside of a big *saranga*.

The ends of the log are left solid, shaped in a characteristic rounded tapering form very reminiscent of some kinds of *goloji* in appearance. The dugout is then expanded; after softening with fire its sides are forced apart, and in consequence it acquires, as every expanded dugout must, a low gently curved sheer, and the ends rise to form low overhangs. To keep the sides from closing up again the *saranga* are fitted with very solid floor timbers which nowadays are usually secured with iron spikes. When the hulls become damaged or worn they are repaired with planks fastened with boat-nails. As the hulls are often heavily tarred it is often difficult to tell with an old *saranga* how much dugout survives and how much has been replaced with planks. *Sarangas* are usually covered with a *chauni* throughout their length. They have a light mast stepped at the bow and a single squaresail.

Many small dugouts built in this fashion are used in south-eastern districts for fishing and ferrying and general waterman's work. They are light, graceful craft and their appearance belies completely any idea that a dugout must necessarily be a heavy or unseaworthy vessel. Their shells are often thinner and lighter than those of plank-built boats of similar size and form. Many of them have their solid ends left in flat board-like *golois* like some of the smaller and simpler plank-built boats of the Sylhet district and the larger, often frameless, *daurat nauka*. They closely resemble these plank-built boats in general appearance and it is sometimes only by very close examination (especially when they have been much repaired) that one can establish that they are of dugout construction. They tend to need more floors to keep them in shape than the plank-built boats do, and these floors extend up the sides into continuous futtocks.

Some of these small dugouts are extended with plank sides to make a graceful and able type of canoe which is used for sea fishing. The basic expanded dugout with its irregularly spaced sawn floors is pierced down the gunwale at intervals of about 6 in. A 1 in. plank which has been shaped very slightly is then held in position with clamps for a few feet down the gunwale.

It is drilled at intervals corresponding with the holes in the dugout and lashed into position with one or two turns of split bamboo through a few of the paired holes. The seam between plank and dugout is then caulked with teased-out old rope and the whole packed on both sides with a seal of grey mud. Over this mud strips of the broad green leaves of palms are laid, and over these in turn tightly bunched long coarse grasses. On the outside of the boat the whole seam is finished off with a protecting cover of split bamboo strips. The whole is held in position, and plank and dugout held together, with a tight sewing of split bamboo, the stitch crossed diagonally between the paired holes inside the boat, but not on the outside. The holes are then finally plugged and the bamboo stitching jammed so that it will work as little as possible, with teased-out old rope, driven in hard.

To support the side planks, as the builders put it, 'against the blows of the sea', half a dozen short round spars, often roughly cut and still with the bark on them, are bound tightly into position with their feet against the side of the dugout just below the seam inside. Over these, and at the level of the seam, two bamboo stringers are lashed into place with split bamboo binding, which is passed through the seam holes at intervals of about 2 ft. The vertical and the horizontal spars are not lashed to one another. The heads of the vertical spars are secured to the upper edge of the plank by lashings passed through holes drilled in the plank. Occasionally a narrow second plank is added, nailed roughly into position.

The largest of these sewn fishing canoes which I examined measured 32 ft. \times 6 ft. 2 in. \times 3 ft. They are dismantled each year when the great seas of the south-west monsoon make sea fishing impossible and the basic dugout is used as a river fishing boat. In November, at the beginning of the cooler, calmer weather the planks are sewn on again and the boat, equipped with a spritsail but propelled mainly with paddles, goes back to use in the open sea. I was told that a well-made dugout will last twenty years of this work, but towards the end of that time so many pieces of timber will have been used to repair her that she has become almost a plank-built boat.

I have described the method used in building these small fishing canoes at length because just the same principles are used in constructing the great cargo-carrying *balams* which are no more than greatly enlarged versions of the simple canoe, both in their general shape and in the way they are built.

The *Chittagong Gazetteer* defines four types of cargo-carrying plank-extended dugout, the *ad balam* with one plank each side, the *balam* proper with two planks aside, the *gadu*, which has three planks aside, and needs thirteen men to work her, and the *jalyanao* with four planks aside. The *Gazeteer* adds that the *jalyanao* is used for deep-sea fishing. In my experience the word *balam* was used indiscriminately by the boatmen to describe

all three types and the number of planks depends more on what timber is available than upon the size of the vessel. Moreover, a *balam* does not always have the same number of planks on each side. The greatest number of planks aside I saw was five, and the *balams* concerned, which were between 60 and 70 ft. long, were not of the very largest kind.

These large sewn *balams* are wonderful and impressive vessels (Pl. IV). Sea-going boats, some of them over 60 ft. long, 7 ft. deep and 12 or 14 ft. in the beam, they are quite without iron in their whole structure. The vertical, partly balanced rudder, works in loops of hand-twisted jute rope. The occasional beams are lashed into position with split bamboo, which is the main form of fastening throughout the vessel. The heavy floors which keep the expanded dugout base in shape are, in *balams* built in the classic tradition, secured with treenails. Above the turn of the bilge the framing is a complex of light vertical spars and stringers. As in the little canoes the vertical and horizontal spars of this framing are separately lashed to the planking and they are not secured to each other. This framing provides a strong but flexible stiffening to the planking, which can work in a moderate sea without coming to any harm. There are no fixed decks and the crew of up to fourteen men live on top of the cargo under the bamboo *chauni* and row the boat from loose planks laid in the bow.

At the after end of this temporary foredeck is stepped the mast, usually in a tabernacle made from a heavy log with a deep notch cut into it (Pl. IV). From a yard on this mast the single squaresail is set. The *balam* is a sea-going boat, and her rigging is stouter and more complex than that of the river boats. She has numerous shrouds and backstays and a forestay. With her long narrow hull and well-cut sail the *balam* can make some sort of a showing to windward in the expert hands of a good crew. I once saw one with a long, thin spar, probably a bamboo pole, its foot secured in the bulwarks to windward slightly abaft the mast, its head thrusting forward the luff of the squaresail about a third of the way down from the head, much in the way the 'vargord' used to be used in the west of England luggers.¹

The planked dugout canoes end at bow and stern in a tall tapering board which occupies the space between the plank ends above the flat top of the *goloi*-like end of the dugout. Many big *balams* have bow and stern shaped in the same way—the board shows clearly in Pl. IV. Others have shaped stern and sternposts of heavy timber lashed into place instead of this board. I have even seen one sewn *balam* with a clipper bow, complete with trail boards. There is a type of sewn boat, locally called a *murina*, and constructed in the same way as a sewn *balam*, which has pointed ends, the stern rising to a

¹ See, for instance, notes by R. Morton Nance and others in Vols. 1 and 3 of the *Mariner's Mirror*.

rounded head ornament. *Murinas* are much used for lightering cargo at Chittagong port.

The sewn *balam* persisted in large numbers in 1952. She had certain advantages, perhaps, of flexibility, ease of repair and economy of heavy frame timbers, over iron-fastened boats. In one single convoy of eight firewood-laden *balams* I met once in the river system just east of Barisal town, seven were big sewn boats of different forms. But in recent years the metal-fastened *balam* has become much more common than the sewn boat, at least in the more accessible areas of the south-east. The metal-fastened *balam* is in her simplest form a close imitation of the sewn boat. I have never seen one of these metal-fastened *balams* under construction, but according to their crews their planks are half rabbeted like the planks of the smooth-skinned river boats and fastened with spikes driven diagonally downwards across the seams. Certainly boatnails are not used and certainly the light side frames, with their network of stringers running fore and aft and quite separate from the heavy floor timbers of the basic dugout, are of the inserted kind.

The additional strength provided by iron fastenings and the development of a technique of using numerous narrow planks in place of a few very broad ones has resulted in the development of variations in the shape of metal-fastened *balams*. Almost all the larger ones now have a graceful sheer with the stern markedly higher than the bow. The sloping boards at bow and stern tend to become smaller and the general appearance to become closer to that of the round-hulled river boats. In some new boats the dugout base has disappeared altogether and has been replaced by a plank-built structure of the same form.

I saw one vessel in which the influence of the round-hulled river boats seemed to be so great that she represented a combination of the characteristics of both types of craft. Her profile was that of a big *balam*, but she was beamier and shallower than any other *balam* I saw. She was plank built throughout and fastened with boatnails, her planking did not run from bow to stern like that of a *balam* but was laid like that of a river boat with a basic spoon of planks running up into the sheer and heavy whales running the length of the vessel above. Built into her bow and stern were shaped blocks of solid timber like the shaped ends of a basic dugout. Her framing was of the orthodox river-boat type. She was beautifully finished. The four bollards which many *balams* have in the bows were carved and decorated pieces of finished timber. Her mast tabernacle was carved and decorated and the lines of her frames picked out in big-headed nails.

She steered with an oar the carved head of the loom of which must have been 30 ft. above the water. Metal-fastened *balams* steer either with semi-

balanced rudders on the quarter or with these great oars, which, unlike the steering oars of the river boats, are little used for propulsion. They are longer and heavier than the river boats' oars, for the long, straight *balam* needs a more powerful steering mechanism than the shallow, beamy river boats. The steering oars are controlled by a rope traveller on a cross-bar between two upright posts and their movement restricted.

The big *balam* is a powerful and attractive type of boat, and her appearance is further enhanced by the brilliant decoration with which many *balams* are embellished. Some of these great plank-extended dugouts are among the world's most vividly painted boats. Bow and stern are picked out in a pattern of triangles and rectangles in green and white, red and orange, while the tapering bow and stern boards are covered with complex designs of every kind. Often oculi are slipped into the pattern, either as a pair of mammal-like eyes on the end boards themselves, or low down on the dugout part of the hull, so that they are under water when the vessel is deep laden. Down the length of the boat white circles a foot in diameter with green and orange centres pick out the sheer. Even the roughly finished masts are sometimes decorated with bands of bright paint.

Group (ii). The Chittagong sampans

The most common boat of the south-east coast of Pakistan is the *sampan*, a vessel of completely different form from any of those so far described. She is a short, high-sided vessel and her general form, particularly her high transom stern with the twin horns rising above it, suggests Chinese influence. She has hard chines and, though her bottom has a marked rise fore and aft, she can sit bolt upright on the mud. She has a high vertical stern. Sampans are the only boats in East Pakistan to have hatch coamings and fixed decks nailed to deck beams. They steer with stern rudders.

They are built on quite a different system from any of the other boats. The bottom is first assembled from planks laid edge to edge without rabbeting and fastened with nails driven in at right angles to the seam from triangular-shaped notches cut into one of the planks. The same system of edge joining is used in the construction in Japan of beach boats and larger craft up to a considerable size. In them, and in the Chittagong *sampans*, the nail notches are subsequently plugged with wooden chips. Next, the floor frames are nailed to the bottom boards and the side planks above the hard chine are built up, edge joined in the same way as the bottom planks. The side frames are then inserted and the deck beams are fitted. Finally the deck planks are laid without edge joining.

Sampans can be divided by size into roughly four groups. The smallest are the open *sampans*, 14–16 ft. long, rowed by one man standing in the

stern facing forward and rowing with the looms of the oars crossed in front of him. I have seen boatmen on a Swiss lake rowing in exactly the same fashion. The small *sampan* carries a boomed spritsail with a very high cut foot. I have never seen one trying to work to windward. They are used for general watermen's work.

The next size of *sampan* is 16–18 ft. long. She is steered from a well aft which is really the after part of the open boat. Forward of this well a hatch is built up for cargo. She carries the same kind of spritsail as the smallest *sampans*.

The smallest decked *sampans* are 20–30 ft. long, and the largest class are high-sided boxy looking vessels 35 ft. long by 8 ft. deep and 12 or 15 ft. broad. These larger *sampans* set a kind of lateen sail. The long flexible yard is nearly vertical in the part that lies forward of the mast. The sail is really a settee, because the foot is in two parts, with a vestigial luff in front of the mast and a vestigial tack line holding down a point on the foot of the sail at the mast. The after part of the sail is boomed with a boom secured to the mast with a rope sling.

The mast is stepped in a tabernacle of the kind used in *balams* and is supported by a forest of shrouds and backstays. *Sampans* of the two larger kinds regularly work to windward when deep laden. The yard and sail are invariably carried on the port side of the mast and when on the port tack the sail bellies back against the mast like a standing lug. *Sampans* usually have to be rowed round to go about. In light airs I have seen a big *sampan* with a jib set from the spare yard, the end of which was pressed into use as a bowsprit.

When the wind fails, four or six men row the *sampan* from a standing position on the foredeck. Because these vessels are high sided they have to row short deep strokes with long oars.

Big *sampans* venture far afield. Flying over the Bay of Bengal in the cold weather they are to be seen in their dozens sailing up and down the coast. With the big *balams* they sail as far north as Dacca and to the Indian border in the west and they are said to work far down the coast of Burma. Their crews live on the after deck under a hood of woven bamboo. Their bedrolls and their few possessions are stowed under the after bench which runs across the transom. They sleep stretched out on the polished boards. Their food is cooked on an open fire on the foredeck.

CONCLUSION

In 1952 not one of the thousands upon thousands of boats of the types described here had a motor, or any other form of concession to recent outside influence. The lives of the boatmen and boatbuilders had been subjected to no violent change in many hundreds of years. It is evident from the

foregoing descriptions that the boats of East Pakistan represent a pattern of craft following widely different paths of evolution and at different stages of their evolution. This account has made no attempt to examine their earlier history and this is a subject which requires careful study. The boats themselves need to be seen, not in isolation, but in relation to the other river and sea boats of the Indo-Pakistan subcontinent, and of the countries to the north and east. In particular the round-hulled, smooth-skinned river boats, perhaps one of the oldest of the forms described here, need to be seen in this wider perspective. They themselves perhaps represent a pattern of boats at different stages of evolution with the frameless *daurat nauka* with its easy curves representing an early form. Studied in this wider framework these boats of East Pakistan may reveal something of the origins of all boats and of the ways in which men have tackled the local problems of developing them.

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At the same time as the material for this paper was being collected a short ciné film of the boats and the life of the rivers was made for the Photographic Records Committee of the Society for Nautical Research. For his assistance with this I am greatly indebted to my friend Syed Enver Masood.

HER MAJESTY'S WILL AND PLEASURE

VOLUME XI OF AN EXTENSIVE
RECONSTRUCTION, 1599-1601¹*Commentary by Patrick Brian MacCarthy*

MORE than twenty years ago, Professor Callender announced that a member of the Society for Nautical Research, E. M. Tenison, O. St J., had ventured so far from the beaten track in the realm of research, afloat and ashore, that some drastic amendments would be required ultimately in our standard histories. In *The Mariner's Mirror*, from 1935 onwards, we have been given summaries of a publication issued in a limited edition to subscribers and not sent to the press for review. This, we are given to understand, is not from exclusiveness, but because the subscription money was only enough for printing and binding; leaving nothing over to recoup the costs of more than half a lifetime's research or to provide extra copies of what in each public library is meant to give pleasure to innumerable readers. As the Royal Naval Colleges of Greenwich and Dartmouth and the National Maritime Museum are in possession of these volumes, many members of the Society for Nautical Research will be able to see for themselves a production repeatedly recommended by the late Sir Geoffrey Callender for 'all sea and land campaigning' of its time, the author having confided in him each new discovery as it occurred.

One most startling result of independent searching among unpublished MSS. was that some 'Considerations' in Lord Burghley's hand revealed him as having urged that Drake be put in command of 'a very great and Royal war' as early as 1581, on behalf of 'King Dom Antonio who hath a just war against the King of Spain'. When in 1578 King Sebastian and the fine flower of the Portuguese race were obliterated at Alcacer Kebir, Burghley predicted that the next objective of Philip II would be to 'get the Crown of Portingale'; which he did, theoretically, in right of his mother the Empress Isabel, but actually via the generalship of the Duke of Alba at

¹ 'Elizabethan England: Being the History of this country "In Relation to all Foreign Princes". From original manuscripts, many hitherto unpublished; co-ordinated with XVIth-century printed matter ranging from Royal Proclamations to broadside ballads. A Survey of Life and Literature. By E. M. Tenison, Officer of the Order of St John of Jerusalem, Corresponding Member of the Royal Academy of History of Spain, and Member of the Society for Nautical Research. In XII Volumes quarto. With many hundred portraits and other illustrations in colotype, also title pages and portraits in line.' Volume XI, 1956.

Alcántara, a victory followed by the successful operations of the Marqués de Santa Cruz in two sea battles at the Azores. That series of conquests was depicted in Volume iv of this History, which now devotes 660 large quarto pages to the long-misunderstood events of 1599–1601. Although the 1599 Irish war (of which we are given a new sketch map) was not a naval war, yet Essex's Commission, now first translated from the Latin, and filling nearly nine pages, gives him command afloat as well as ashore. In Spain, on hearing that Essex was commissioned Lord Lieutenant-General, and being aware that the English Navy was in readiness for action, King Philip postponed the intended invasion of Ireland to a more favourable time.

Spanish spies were alert and efficient, and are likely to have known that in addition to the ships, pinnaces, barks, etc. already in 'attendance and patrol upon the seas in and around the shores and coasts' of Ireland, the Queen had added that as circumstances might require '*We might be moved and induced to despatch more and greater ships and naval forces unto the aforesaid ports of Our Realm of Ireland*': in which case she granted to '*Our Lieutenant and Governor General full power and authority to dispose, command and govern*', not only the ships, etc., already appointed, '*but also all such ships, vessels and fleets, and other barks, whatsoever, as may be in Ireland appointed or despatched by Us unto the aforesaid parts, for Our service in or about Our aforesaid Realm of Ireland*'.

The Commission (entirely ignored by all previous historians) is most elaborate, and appears to provide for every possible contingency. It was accompanied by separate Royal Letters Patent, authorizing Essex to return for consultation with Her Majesty at any time he should judge desirable, a temporary substitute being selected by him to represent him in his absence. This document is reproduced among the collotype plates. It was one of the chief conditions upon which Essex accepted the Vice-royalty: 'the hardest task that ever any gentleman was sent about', as he remarked.

The present writer remembers Professor Callender saying that for lack of notice of that document, modern criticisms of Essex's actions had been launched at random.

We now see Essex's staff officers commenting on 'his Lordship's victorious and successful journeys'. The legend that he 'failed miserably' in Ireland fades away in face of ample evidence to the contrary. The only two defeats were of small forces away from him: viz. Harington was lured out of garrison by a false promise from the Irish rebels to surrender, and Sir Conyers Clifford was ambushed and overthrown near the Curlew Mountains (where an Anglo-Norman force had been similarly trapped centuries before). Whenever Essex led the troops in person the results were most satisfactory, as the Privy Council admitted at the time. Far from his

operations being erratic, they were masterly: and one of his officers claimed that 'betwixt May Day and Michaelmas' he had achieved more than any previous Lord Lieutenant in so short a time.

It has been usual for us to accept the Queen's quips as the measure of his actions. But in the Introduction to Volume 1 of this series it was pointed out that Fulke Greville had stated that '*first* by Essex and *after* by Mountjoy' the rebel Tyrone had been subdued.

Though with Essex's *Laws and Ordinances of War for Ireland*, and the Itinerary now supplied (pp. 180-193), with map of the three phases of the campaign, anyone can follow the outward course of events, 'the causes that govern the events' are so complicated that the sequel, up to the spring of 1601, fills half the volume.

In many instances our current fallacies are dispelled at a glance; for example, at the mere sight of a facsimile of the actual truce with Tyrone, signed by him.

We are told that as first written this volume perished when the author's home was wrecked by fire in 1952. Of the original version the first President of the Irish Free State, Dr Douglas Hyde, read the Introduction and parts of the main text in typescript. He said he knew no other work in which the reader was enabled to sympathize simultaneously with Essex and Tyrone; and that it was remarkable to see justly treated from contemporary matter in one and the same volume the protagonists of three races so different from each other as the Celtic Irish, Protestant English, and Spanish Catholics.

As this review is not meant to save people the trouble of reading the book, but rather to encourage them to study it, I will not try to describe the extraordinary network of intrigue from the Court by which Essex in England was ultimately overthrown. 'Your ruin is desired and subtly plotted', he had been warned by Henry Vicomte de Turenne, Duc de Bouillon. But though aware that in going to confront the Queen's Irish rebels he left her surrounded by his own detractors, Essex wrote that even as, if a house were on fire he could not stand aloof, so the plight of Ireland impelled him to attempt its rescue. Nothing could be further from the truth than Sir Sidney Lee's assertion in the *Dictionary of National Biography* (1888), Volume xiv, p. 432, that 'Essex manifested boyish exaltation' at being appointed to the Vice-royalty. Ireland had long been the grave of reputations; and Essex's private letters to his personal friends show him fully aware of the odds—including probable trouble from the Court during his absence. But 'I will not forswear virtue for fear of ostracism', he wrote.

The system of this History is to set at the beginning of each section a flyleaf striking the keynote of what is to follow, in the exact words of those

principally concerned. Even to read the flyleaves and to look at the maps and illustrations is to gain a swift insight into the conditions.

This volume is called *Her Majesty's Will and Pleasure*, and the two ensuing quotations on the inner title page (both from documents hitherto ignored) give a forecast of the tragedy:

Our dearest Cousin and Counsellor Robert Earl of Essex, Earl Marshal of England, is distinguished for his most approved loyalty towards Us, his surpassing experience of the art of war, his unparalleled qualities, and his courageous and brilliant exploits, . . . at home and abroad.

The Queen. Commission to Essex as her Lieutenant General and Governor General of Ireland: 'the twelfth day of March, in the one and fortieth year of Our reign.'

Elizabeth by the grace of God Queen of England, Fraunce and Ireland, Defender of the Faith. . . .

Our pleasure is to have the head of the said Robert Earl of Essex cut off at the Green within our Tower of London. . . .

'Given under Our Privy Seal at our Palace of Westminster the twentieth day of February in the three and fortieth year of Our reign.' Death Warrant signed by the Queen.

Events between March 1599 and February 1601 make an extraordinary story as unfolded with the relevant documents. Even of Essex's death warrant we are given a large facsimile, with a line by-line-transcript to enable novices to read it. It was hustled through in a hurry, with only a wafer seal, in marked contrast to the beautiful calligraphy and impressive Great Seal of his 1596 and 1597 Commissions (Volume x).

Not least surprising of the revelations is that the Spaniards whom Essex had fought, and whose overtures for peace he had opposed in Council, put him on the stage *Dar la Vida por su dama*, and the 'lady' was not the Queen but his wife. The modern nonsense of an amorous interpretation of his services to the Crown is dispelled by the reminder that Her Majesty was Essex's grandmother's first cousin, and that he was aged eight and she long past her youth when first he was presented to his formidable kinswoman. Whereas 'S.L.L.' in the *Dictionary of National Biography* in 1888 fitted him out with an imaginary harem of 'no less than four' Maids of Honour [one of whom only came to the Court after his head was off and none of whom ever went astray], we have been shown from Volume viii onwards that his great personal love was for his wife, Sidney's widow, whom he married when she was left 'poor and friendless'. Her 'extraordinary handsomeness' was renowned into the next generation; but several singularly unprepossessing portraits had been labelled with her name in our time. The right one, discovered at last, was published in 1947 in Volume viii.

And Volume xi now describes how a devilish misuse of his wife's name was to bring Essex to disaster with the Queen. The story divulged is much more amazing than any of the dramas of which he was the hero in Spain,

France and England, in days when it was still remembered that he had made a marriage of affection. We are shown how the Queen's antagonism to his wife was worked upon by his enemies (in some cases his near relations), not exactly as in Corneille's *Le Comte d'Essex si grand et si renommé*, but with even more deadly complications.

Another 'novelty' is that we see Sir Robert Cecil in 1599 referring to Essex as his 'eternal' friend, and as 'so great a General'—being only by degrees turned against him, by methods so subtle as to suggest rather an Oriental Court 500 B.C. than a Christian world A.D. 1600—I.

The present writer was one of the party, long ago, when the historian confidentially showed Professor Callender the series of intended illustrations. *The Dictionary of National Biography* had stated that two portraits of Essex existed, and some miniatures. But the author of this History had collected photographs of thirty-seven paintings, and six or seven miniatures of Essex to choose from. Of the portraits the most striking was that reserved for this volume (plate 1), as Professor Callender judged it to have been painted at the end of 1598 or early in 1599. So far as can be ascertained, it has never before been published.

The maps, as usual, form an important feature. Until this History began appearing in 1934, we had usually estimated Elizabethan cartography from printed maps. But as England was at open war for so long, it seemed unlikely that the most important maps and charts would be published to be acquired by the enemy. A conjectural list was made of maps and plans likely to have been required privately for use of Her Majesty's ministers and champions. Most of them were found, and were submitted for criticism both to Professor Callender and to the renowned cartographer, the late Dr F. C. Wieder of Leiden. Selected examples were reproduced from Volume 1 (1934) onwards. But in this volume (xi) it is not a MS. map but a printed one which is important: Boazio's *Irelande*. Only three copies are now known: viz. at Knebworth House, and in the British Museum and at Trinity College, Dublin.

In Ireland one of the chronic exasperations of the Queen's forces had been the 'plashed forests'. The maps of Hondius, Mercator, and others, gave scant indication of the forest localities. Nevertheless, it seemed as if Essex could not have got over the ground as quickly as he did unless he had possessed a map approximately indicating the forests. When in 1927 inquiry was made at the British Museum, there seemed to be nothing answering to that requirement. But at Knebworth House was found a map on silk which then appeared to be unique (plate 4). Subsequently, a copy of the same on paper was acquired by the British Museum. The reasons why the former may be dated prior to 1599, and the latter in 1602 or 1603,

are given with the plates 4 and 4*a*. In conjunction with the new sketch-map of the campaign, Boazio's production is of special interest.

It is not possible to compress into a few pages the substance of this volume, in which the co-ordination of English, Irish, Spanish, French and Venetian material form a drama historically, artistically, politically and humanly astonishing.

That the Spaniards put Essex on the stage as Murdered Innocence, and imagined the Queen consumed with remorse for having been tricked into sacrificing 'the bulwark of her Kingdom', seems never to have been known in modern England until now. It is the more remarkable in conjunction with the account of his alleged monstrous crimes sent officially to every court in Europe.

A private letter from the French Ambassador to his brother-in-law, describing Essex's Arraignment, relates how the peers appointed for the trial were 'sodden with beer and *ivre de tabac*' when they condemned to death 'the best man in England and the one who best loved France'. The trial scene is one of the most dramatic of many in these volumes, excepting only the trial of Mary Queen of Scots in Volume vi.

The accusation of intending to be king and found a Devereux dynasty as Robert I, was dismissed by Essex as 'Absurd'. But on that accusation he was condemned to death. And it had not improved matters for him with the Queen that Tyrone had declared he was the only Englishman he could trust; or that one of the 'common sorte' when asked, 'Did you hear my Lord of Essex say he meant to be King?' replied 'I did *not*. But *if he were*, it would be better for *us*!'

The tale that Essex planned to usurp the Crown began in 1594. It appeared to him too fantastic to be taken seriously. But Queen Elizabeth's refusal either to marry or to name her successor had set all Europe speculating as to the succession. After the execution of Mary Queen of Scots the English Catholics regarded the Infanta Isabel as their rightful Sovereign. This controversy on '*The Next Succession to the Crown of England*' is usually ignored nowadays, for as James of Scots entered his new Kingdom without having to fight for it, we are apt to assume that there was never any other alternative. We have, however, been shown in Volume ix that the controversy was more than academic.

It is remarkable that in this volume (xi), in which Essex as general and statesman emerges vindicated, we are also enabled to sympathize with the Queen, when we see how subtly her 'infinite absoluteness' was worked upon by men who knew exactly how to influence her, while persuading her they were her humblest slaves—Lord Henry Howard, the chief wire-puller, was amazingly cold-blooded and unscrupulous.

The affair of 8 February 1600-1 was not intended as rebellion but was meant to be a *coup d'état*. Had Essex meant war, he would have gone about it very differently, as he remarked.

In Tudor treason trials the accused was never allowed counsel for the defence, but had to conduct his own defence single handed: with the consciousness that as the verdict would have been decided beforehand nothing said by the accused—however true or eloquent—could make much difference.

As the peers condemning Essex were his near relations and old acquaintances, he requested them to be content with taking his life and do him the favour to defend his honour. Strange as it may seem, he evidently expected them to do this; instead of which they took the most elaborate means to blacken him backwards to the beginning of his career—and circulated in his name an epitome of a 'Confession', the original of which cannot be found because it never existed.

The account of his Cadiz victory was ordered to be cut out of Hakluyt's *Principal Navigations*. In our day the 'Everyman' edition was taken from a mutilated copy, the editor not noticing the omission; but in Volume x of this History the events of 1596 stand out clearly.

Although Volume xi is the least naval of any in the series, we are never allowed to forget the sea services. And one of the Venetian statesmen during peace talks in 1600 observed that evidently the Queen believed she stood to make better terms with Spain if she kept her Navy in prominence.

This being the History of England '*In Relation to all Foreign Princes*', Spain continues to loom large. But we have to await the next volume for the Spanish invasion of Ireland, postponed as soon as it was learnt in Madrid that Essex, the victor of Cadiz, was the new Lord Lieutenant-General. In 1598 he had predicted of Philip III that his blood would be 'hotter than his father's' and far from the Spanish menace dying with King Philip II, it was entailed upon his successor, who was by no means the weakling we used to be taught to despise. But England's decline began from when Lord Burghley departed this life; for he—imagined in modern history as a pacifist—has been shown in these volumes as a great war minister. '*God's blessing upon your Lordship to be a scourge unto the Spaniards*', he wrote to Essex in 1597. And in arranging for Essex to be appointed Master General of the Ordnance not 'during Her Majesty's pleasure' but for 'term of natural life of the said Earl', he thought he secured continuation of his strong foreign policy. Essex was not yet 31 at the time when he was described as 'in Spain and Italy having as much fame and renown as ever; and more than any of our nation had; for an enemy he is the most honoured man in Europe'.

He was 34 years and 3 months old at the last, when executioners had to be smuggled into the Tower by night to avoid angering the 'common sorte'. Two were sent, 'in case one should faint'. Executioners in Tudor times were not given to fainting. But this one liked his task so little that from nervousness he bungled it, in three strokes instead of the usual one. Nor did he say 'Behold the head of a traitor', the customary official formula. He only said, 'God save the Queen'. Into one of the MS. reports of the execution, somebody added at the end *Sic itur ad astra*. The street ballads condoled with Essex's 'deare wife and children three', and boldly declared that he had been 'made away by Envie's spite'. The ballad-monger was arrested and the ballads confiscated. A student at Oxford who made a Latin oration on 'a great General lately dead' was taken to prison.

We are often told that 'no man is a hero to his valet'. But Essex was certainly a hero to at least three out of his six secretaries, as their own writings remain to show. 'I would rather lose with my Lord than gain with his opposites' declared Henry Cuffe, and (says the author) 'the Fates took him at his word'. His honour is cleared in this volume, apparently for the first time.

Among much completely new material not the least significant is a long letter of Essex to his cousin Fulke Greville on how to study history. It is strange that so interesting a document should have lain unpublished until now.

We may ask what was the element in Essex which enabled his former colleagues to manoeuvre him to his doom? As a leader in the field he was exceedingly able; in statesmanship he was the pupil of Lord Burghley; and his intellectual prestige is indicated by his being unanimously elected Chancellor of Cambridge University in succession to Burghley. It is not possible to encounter him at first hand without seeing that he bears no resemblance to the pseudo-Essex of modern history. The author of his resurrection suggests that his Achilles heel was an unwillingness to believe that any man in his own rank and world would equivocate or play a double game. Himself outspoken both in his likes and dislikes, he assumed a similar sincerity in others. It is now shown that his worst enemy was his cousin Lord Henry Howard who, while swearing everlasting devotion to him, and invoking God to witness that he prayed for England and Essex in the same breath, was all the while a spy for Spain.

From Volumes II to XI in this history Lord Henry Howard ('my Lord Harry') is unveiled as a plausible, sinister and very dangerous plotter. While apostrophizing Queen Elizabeth's 'perfections' he was drawing a handsome secret revenue from her enemies in time of war. That he, who never drew sword, prospered exceedingly, won an Earldom and the Garter,

and in old age died peacefully in his bed, whereas Essex, who from the age of ten had been admonished to serve the Crown—and from 19 to 33 most strenuously toiled *pro Regina et patria*—was to end on the scaffold, and to this day has no memorial, is perhaps typical of what one of the Elizabethans called 'this wicked world'.

Tempus ad lucem ducit veritatem we used to be told. A Spaniard in the early seventeenth century expressed it differently: that mendacity is always first in the field, and that truth comes slowly 'limping along on the arm of Time'. But in this volume truth is not 'limping', but marching briskly, accompanied by such documentation that we no longer need be in doubt on the vital issues. The puzzle now is, as the author suggests, how much is destiny and how much free will? A question beyond human solution. But there is a classic axiom that the later truth comes 'the longer it lasts, when Envy itself shall have given way to it'. And so perhaps in this case.

SPEED UNDER SAIL

By the late James S. Learmont

THE speed capacity of the sailing-vessel: our knowledge of this subject must be based on records of the past. Unfortunately the real end of the sailing-ship came with the First World War when no one had any thought to spare for it. From 1920 onwards as the last sailing-ships clung to existence, more and more people became interested in the history that lay behind them, but by this time it was becoming difficult to collect first-hand evidence, and every statement was accepted without question. In this country research was made almost impossible by the fact that the majority of ships' log books had been destroyed as owners went out of business. (Mr Anderson of Falkirk, who intended to write a history of the *Lochs* and *Shires* of Glasgow, found no material left and had to abandon the idea.) The case was different in Germany, where the detailed records kept of Laeisz's ships have been of inestimable value to the historian of sail.

It is time, if the truth is to be arrived at, to examine the evidence that we have in order to distinguish history from legend. It is my intention to do this as far as my own knowledge and experience will take me.

As an experienced shipmaster in the days of sail with passages (as stated by my owner) well above the average, I was very much interested in speed under sail. I am more than interested in the impossible claims made, especially those in the 450 (miles per day) region. It is not generally recognized that the 'record runs' claimed by various sailing-vessels in the nineteenth century were never checked. They are not records in the modern sense as are those of the aeroplane, the runner, or the yacht, where every detail is verified by qualified observers. In spite of this, they are acquiring the value of history through being published yearly in *Lloyd's Calendar* along with the lists of record passages. The record passages are authentic, arrivals and departures having been noted by *Lloyd's Shipping Gazette*, but the days' runs are a different matter.

About a hundred years ago there was in Britain an almost revolutionary change in the ideas of owners as to the size that ships ought to be. For a long time ships of under 1000 tons dead-weight had met the requirements. Following the discovery of gold in California in 1849 the Americans built ships such as *Flying Cloud*, *Flying Fish* and the *Sword Fish*, which were about 2500 tons dead-weight, specially fitted out for carrying passengers and able to take just over 2000 tons of cargo. These clippers, the first

merchant ships designed for speed, made good passages, but I cannot find that any claim was made by one of them for an outstanding day's run.

Soon afterwards, with the finding of gold in Australia, British ship-owners in turn wanted speed combined with passenger accommodation. The senior masters however were not in favour of the ship of over 1000 tons, and it was at that time the custom for the master to be consulted when a new ship was to be designed. The owners got round this difficulty by buying American-built ships. America, seeing a market, did not waste any time; they had the means of building large wooden ships, and the experience, with material there for the taking. They built 'on spec.' for the British market, and it was essential in the special circumstances that to effect profitable sales in Liverpool, the ships offered should boast of speed. (It was customary, even in my time, about the 'nineties, to advertise a vessel about to sail by a large brightly coloured poster leaning up against the mooring-post, proclaiming, among other attractions, her sailing qualities.) It is against this background of advertisement that some well-known claims must be considered. These claims as given in *Lloyd's Calendar* are:

Date	Ship	Day's run (miles)
1854	<i>Champion of the Seas</i>	465
1854	<i>Lightning</i>	436
1856	<i>Lightning</i>	430
1855	<i>Donald Mackay</i>	421
1855	<i>James Baines</i>	420
1856	<i>Great Republic</i>	413
1853	<i>Sovereign of the Seas</i>	411

As Captain Daniel (who supplied this item) points out, these runs were all made by American-built ships, the famous clippers of Donald Mackay. They were fine ships, without equal in their day, but it is to be doubted if these runs should be accepted. (Captain Kornitzer writes that when the great Hilgendorf of the 'Flying P.'s' was asked to give his opinion about the fantastic claims of record days' runs he just laughed.)

In the first place it should be noted that in each case the passage which included one of these record runs was only an average one. Taking the North Atlantic runs claimed it is strange that you do not find the ships making them (*Lightning* and *Donald Mackay*) in the list of record crossings of the Western Ocean. The passage during which the *Champion of the Seas* claimed the highest day's run ever to have been made was one of 72 days Liverpool to Melbourne, a run which was accomplished by the ships *Thermopylae* and *James Baines* in 60 days.

In the second place, in nearly every case the speed was arrived at by the heaving of the hand-log. A 'Yankee Log' became a by-word when speed under sail was being discussed by sailing-ship men. For the uninitiated, the operation went thus: with a boy holding the sand-glass and three or four hands standing by (if the ship was travelling fast), the officer of the watch would plug in the drogue, a triangular piece of wood that kept the line in its place where it struck the water. A good length of line from this was allowed to run free to clear the drogue from the 'drag' of the ship. When the first mark, a white rag, reached the rail the mate said, 'Turn!' Meanwhile the line was running out and the boy holding the glass would say: 'Did you say "turn", Sir? Well, turn it is.' That would give her at least two or three knots in excess of her true speed. When the sand had run out the boy would say, 'Stop!'. The mate would ask: 'Did you say "stop"? Well, stop it is.' Now that was a bonus of a good five knots; hence their reporting their heaving the log and recording anything up to 19 knots. In this way was calculated the day's run. (In only one published case is a run of over 400 miles claimed with the daily positions given for a week; this will be discussed later.) Heaving the log with a ship going even at 12 knots was not easy. In my own experience, when a sailor before the mast in the Aberdeen White Star barque *Strathdon*, it has taken three apprentices, the officer of the watch and myself to haul in the line at that speed. In the conditions that would prevail in a ship going at a much higher speed it is doubtful whether the master could have spared hands to be used for such an inessential job.

This recording of the hand-log being constantly in use was just an elaborate scheme of window-dressing, expected by their advance agent who, like those of film-stars from the U.S.A., did not miss an opportunity of getting full publicity for box-office purposes.

In the third place, the claimants of these high speeds must have known that their ships could not stand the terrific strain on hull, spars and rigging which would be involved. They were all wooden ships, new of course, but even new there was the question of when the seams would open up with the terrific pressure. With a displacement of at least 3000 tons, the ship was subject to a drive of over 2750 horse-power. (This figure was arrived at by taking an approximate proportion of the results of the tests made at Hamburg on the *Preussen* by means of a model in a testing-tank, of which particulars are given by Commander A. Villiers.) The four-masted barque *Great Republic*, which claimed to have averaged (on the San Francisco run) 19 knots for 19 hours of the 24 of her record run of 413 miles did, in the end, burst her hull and so was lost.

A hundred years ago the use of wire for lower rigging backstays and

stays had not begun; hemp was used. It was always accepted by seamen that new rigging, especially hemp rigging, took some time to settle on the bolsters and hounds, and any risks taken before the process was complete generally ended with dismasting. For about a year the rigging would continue to stretch, and you cannot drive a ship with slack rigging. The ship *Lightning*, claiming her run of 436 miles on her maiden voyage from Boston to Liverpool reports in her log: 'Hove the log several times and found the ship going through the water at the rate of 18 or 18½ knots; lee rail under water and rigging slack.' It is my earnestly considered opinion that that ship's lee-rail could not have been put under with rigging that was admittedly slack.

It is my own experience of sailing at high speed that makes me doubt if ships of lighter construction and rigging could have stood the strain of yet higher speed. When master of the iron clipper *Brenhilda*, built at Glasgow by Barclay Curle in 1875, we were closing on the land in the vicinity of the Gulf of San Jorge towards Cape Deseado. From noon of 4 July to 6 a.m. on 5 July 1902, we averaged 16 m.p.h. for 18 hours. (We did not attempt to heave the log under the conditions existing.) The run was between observations, by the sun on the 4th and the stars on the 5th. We were favoured by the absence of heavy seas, yet that strongly built iron ship, with iron topmasts and iron yards up to topsails, was straining almost to breaking-point. What is too often forgotten is the effect of such strain on the personnel. Watching a ship straining like this, when the slightest break would mean disaster, is a heavy load on a shipmaster. To think that another man, in the open ocean with heavy seas to contend with, could drive his ship two to four knots higher still, is impossible to me.

Later that month, after rounding Cape Horn, the *Brenhilda* heading north was driving through snow before a south-westerly gale under topsails and main topgallantsail. I decided to set the fore topgallantsail and went below, where I soon realized that I had made a mistake. The ship, doing about 14 knots, was shaking dangerously. I was secretly relieved when the lee-sheet parted and I was able to give the order to clew up and furl. (Incidentally the high speeds reached resulted in a correspondingly short passage; which as we have seen was not necessarily the case with the record runs that we are considering. We arrived at Valparaiso 57 days from Ushant, the passage being recorded in *Fairplay* as the fastest of the year.) Again, when I was master of the four-masted barque *Bengairn*, in December 1906, when running the easting down we had a day's run (noon to noon) of 335 miles, and this was just as much as the ship could stand. (It must be admitted, though, she was not built for speed, being flat-bottomed and no clipper.)

If these speeds forced such strains on especially strongly built iron and steel ships, it is unthinkable that still higher speeds could have been attained by softwood vessels, as were the Americans.

With reference to the ship *Lightning*, the periodical 'Sea Breezes' is carrying the Master's letters to the *Ship's Gazette*, and it is surprising to read that she is not making any day's runs within 100 miles of what she claimed prior to being sold. In several the speed of the *Lightning* on passage from Melbourne to Liverpool is given; even a passenger's estimate does not exceed 15 knots and then the stunsail booms were in the water. Slightly over 300 is her best, and rounding Cape Horn from west to east her average, for 11 days is under 9 knots. This is below the average as good fair winds prevail there and the current is favourable. As the crew were paid by the run, and (it was) not a case of 'more days, more dollars', every assistance was readily given to make the passage as quickly as possible.

The most extravagant claim of all was made for the ship *Champion of the Seas*, an American-built ship under the British flag. For her it was claimed that nearing Australia on her first voyage under a British shipmaster, she made 465 miles from noon to noon of 11/12 December 1854. In this case positions were given for a week, as follows:

1854 Dec. 9th	Lat. 46° 49' S.	Long. 75° 08' E.	Distance 222 miles
10th	Lat. 46° 44' S.	Long. 81° 55' E.	Distance 297 miles
11th	Lat. 47° 01' S.	Long. 88° 31' E.	Distance 289 miles
12th	Lat. 49° 58' S.	Long. 99° 15' E.	Distance 465 miles
13th	No observations		
14th	Lat. 45° 42' S.	Long. 104° 46' E.	Distance 341 miles
15th	Lat. 43° 08' S.	Long. 109° 30' E.	Distance 215 miles

A study of these gives some very curious facts. We find that during the 24 hours in which this ship was supposed to do 465 miles on a S. 67½ E. course she made difference of latitude south 177 miles, a most unusual thing to do when running the easting down. Next day, the 13th, he reports 'no observations', a very convenient thing for dealing with any subsequent queries, and in my opinion a most unlikely thing, as she was now making northing, and southerly winds bring clear weather in the Southern Hemisphere. It is my opinion that he did get observations (or could have done so if he wished) but that they put him west of the position he was claiming to have reached on the day before. On the 14th we find her latitude at noon is 45° 42' S., or difference of latitude 256 miles north from her position on the 12th. These differences of latitude give a total of 433 miles of useless sailing when she should have been making difference of longitude. The week's run can be laid down on a track chart, and there the dog's hind-leg produced by the strange course will cause any

experienced navigator to wonder. If you use a second track chart and plot the courses, stopping on the 11th and resuming on the 14th, you will find that 465 miles of a direct course just fits into the space, giving 230 miles per day which was about her average for the other days given. Her average speed for the 7 days was about 10 knots.

Why was such a claim made at all? We are told that Captain Newlands was 'a modest and reserved type of seaman of great integrity'. He only made this one voyage in the ship. It was unlikely that there was any personal motive; somehow it had become a habit of all concerned to glorify the sailing qualities of their ships in the cause of advertisement. In this case the master was engaged in the highly competitive Australian passenger trade of the 'fifties.¹

It is typical of the ignorance general to-day in this country about speed under sail and its limitations, that a well-known contributor to the *Nautical Magazine* justifies his belief in the record run of the *Champion of the Seas* by writing: 'If a Thames spritsail barge could do 12 knots I don't see why it could not be possible.' The 12 knots referred to was achieved between the Nore and Gravesend where the flood-tide runs at between 3 and 4 miles per hour. This speed was not through the water; it was over the ground. Without a doubt a Thames barge is capable of good speed under sail but I am certain after many years of observation that eight knots is their maximum (and the water must be smooth for them to reach that).

Quite recently the son of a master of a Manx-built schooner furnished the editor of a Scots paper with the following. The schooner *Mary Grace* of Wigtown had gone from Wigtown Bay to the Bar Lightship, Liverpool, in 6 hours. As the distance is 105 miles readers can judge the claimed speed, and the tide need not be considered as she was crossing any tide that came on her route. Anything that a Manxman built could sail as long as they left her rigging as originally planned. I knew them well, also the best of what Moray Firth and Morecambe Bay produced, and to give any of them full credit, when loaded or light, 8 miles through the water was their limit; on a length of 100 feet this was good sailing. I knew the master of the schooner *Mary Grace* well and he, I am sure, would never have made such a claim.

Twenty years ago I watched the king's yacht *Britannia* in a race off Harwich, with the wind at N.N.W. and as much as she wanted; her lee side under to the skylights, she was throwing sprays 20 feet from her

¹ Captain Learmont's final draft breaks off here. The rest is taken from the rough draft, with additional paragraphs, not necessarily in the order he would finally have approved. One or two other paragraphs or sentences have also been inserted prior to this point. The material is entirely from his pen, although the arrangement of some of it has had to be guessed at.

weather bow. Later the then Major Hunloake told me that she was doing 14 through the water and that this was about her limit. (Similarly, nearly seventy years ago, I heard that the Clyde-built yacht *Satanita* in a race from Hunter's Quay around Ailsa Craig in a full whole-sail breeze averaged 14 knots.) And we are asked to believe that certain ships were making 18½ and 19 knots and we to-day find people believing it.

As a pilot at Dungeness, I saw the four-masted barque *Herzogin Cecilie*, with Captain de Cloux in command, racing up Channel in a moderate south-westerly gale. She was in ballast after dry-docking at Birkenhead. She was doing about 15 knots as she ran away from the Blue Star liner that I was piloting. To me she appeared to be leaping out of the water and from the Downs to Norway she was just a little over the 24 hours according to Lloyd's List.

(In 1899 I was 4th officer in the Castle Line's S/S *Pembroke Castle*. Homeward bound in the south-easterly trades she broke down and they had a few days' work in the engine-room. As a four-masted barquentine we got every stitch of canvas on her, even the boat-sails, and she was doing about 2½ to 3 knots. At a later staff dinner, when the officers met, she was doing a good 7. Many years afterwards I was told this.)

A very important factor in maintaining speed under sail is the relative direction of the wind. The best sailing-point is, of course, with the wind on the quarter and all square sails drawing with the tacks aboard. Directly the wind goes aft you lose the force of the wind and it takes a gale dead aft, and your canvas must be reduced, to give you the pressure necessary for speed as your going away from the wind at (say) 12 miles per hour, naturally reduces the force by that amount, and, of course, you lose the pull of the sails on at least the foremast.

From every angle, taking my long experience in sail into account, I do not believe any ship ever exceeded or even reached 400 miles in 24 hours under sail. I believe that the best day's run (noon to noon) ever to have been made under sail was that of the five-masted barque *Preussen*, when she made 370 miles under Captain Petersen in the South Pacific. A superb ship, in ballast, with a large crew, she had everything in her favour. Even at that, she had the two-knot Humboldt Current under her (her speed through the water would be about 14 miles per hour). Her sailing capacities, unlike those that we have considered, were reflected in fast passages. That is, after all, the true test of speed under sail. Sailors always spoke of fast passages and never about fantastic days' runs. It was for the passengers, present and prospective, that unusual runs were put around, just as the addition of a dummy funnel was used when steam came in.

All the same, there is considerable interest in these signal papers as they are probably the most important among the few that have been preserved since 1916. Indeed the regulations for the destruction of all such records were extremely strict, and unless some officer or rating surreptitiously took them from their files as souvenirs, all would have been burnt after the stipulated period according to the rules. Many years after the Battle of Jutland this particular batch, evidently used in the compilation of the *Official Despatches*, was found in a cupboard in the Admiralty in the course of a periodical 'clear-out'. The officer concerned asked the commander in charge of the

department what was to be done with them, and received the reply: 'Burn them, or otherwise dispose of them.' The officer disposed of them by taking them into protective custody, knowing that in further course of time they would acquire a certain historical value. There was no breach of confidence in this, seeing that the signals had been made public and that the time for their destruction had long since expired. It was this officer who a few years ago presented the papers to the National Maritime Museum, together with a White Ensign flown on board H.M.S. *Colossus* during the battle.

It cannot be claimed that the collection is a complete record of all the messages to and from the Commander-in-Chief as set out in the report; nevertheless, it is fairly representative and has an advantage over the official list in that many of the message forms reveal the human and personal touch not apparent in a mere recital of signals. Here is the sense of urgency, often apparent from the hurried decoding and the scribble written in haste, while a large number of the 'chits' are in the handwriting of the several signal officers or are initialled by them. Easily recognizable is the writing of Lieutenant-Commander Herbert Fitzherbert, Jellicoe's flag lieutenant, and of Commander A. R. W. Woods, the fleet signal officer; both were afterwards vice-admirals.

There can be little doubt that the most important and dramatic signal of the day was the deployment signal made by the Commander-in-Chief at 6.15 p.m., which brought the Grand Fleet from its cruising order, divisions in line ahead disposed abeam, into single line-ahead steering S.E. by E. The flags were Equal Speed pendant over letters C L, namely a pendant consisting of seven vertical bars of white and blue, above a rectangular flag (C) divided envelope-wise into four pieces, black, blue, red and yellow; above another flag (L) white with red saltire. (In the present Allied alphabet these are Z and V respectively.) The several naval signal schools adopted this very well-known group as their departmental badge, and so commemorated the historic signal in many shields painted with the flags, in various parts of the premises.

The *Official Despatches* reveal certain events that are perhaps seldom recognized. Among them is the fact that Vice-Admiral Sir David Beatty made a Nelson-like signal at 4.30 a.m. on 1 June to his Battle-cruiser Fleet: 'Damage yesterday was heavy on both sides, we hope to-day to cut off and annihilate the whole German fleet. Every man must do his utmost...' The hope expressed by Beatty and shared by the entire Grand Fleet was not destined to be fulfilled as the Germans made good their escape during the night. Another fact is that there were less than five hours of darkness; flag signals in fact were being made up till 9.30 p.m. and resumed again as early as 2.20 a.m. on 1 June.

(Reference to this collection of signal-forms at the National Maritime Museum is made by kind permission of the Trustees. The 'Report of Sighting of Enemy' here reproduced is not from that collection, but in my ownership, having come to me many years ago through one of those 'surreptitious' sources. This message timed 1535 is in Appendix II, and appears in the Museum collection three times. The code groups in the right-hand column would have been 'FHDX-KYDX'.)

NOTES

CAPTAIN JAMES AIRE

Had James, Duke of York, been drowned when the *Gloucester* came to grief, on the Leman Bank in 1682, his name would have been coupled with Prince William and the *Gloucester* with the *White Ship* in popular history books. Mr P. M. Cowburn has shown us how the poets could have been trusted to say their piece, the joys they exhibited at the escape indicating the extent of their lamentations we might have expected at a drowning; though it is doubtful whether they would have gone so far as to say that James's royal brother never smiled again. Now while accounts of

major naval actions do on occasion come up for review, those of less importance, such as this casualty, are generally accepted all standing, and any actor in them who has been so unfortunate as to acquire an ill name, keeps it. It is not therefore surprising to find so large a work as *The Royal Navy: A History* repeating all the scandal and chit-chat about Aire, the pilot who had charge of the ship. One does regret, however, that Laird Clowes quoted evidence against the man without mentioning it came from one who had been found guilty by a court martial of a share in causing the disaster. Mr Cowburn being chiefly concerned with the Gunman Papers is naturally content to describe the pilot as shadowy. The purpose of this note is to bring him out into broad daylight so that we can see what manner of man Captain James Aire really was.

Certainly there was no mincing of words during the man's lifetime. Captain Gunman in the presence of the Duke (and incidentally in the presence of the companies of two ships) damned Aire as an incompetent pilot, and, after the disaster (in effect) described him as the chief architect of it. Ashore he was exposed as one of a band of Republican conspirators set on drowning the heir to the Throne and cunningly arranging his own escape from the wreck. It is a pity the man who spread that story could not have been in the *Gloucester*, with 150 men drowning and the poor ship knocking herself to bits upon the sand bank on that wild May morning. Samuel Pepys, who ought to have known better, was advocating the hanging of Aire in Edinburgh, the Duke as we know going one better and writing how, if he had known the fellow had been picked up alive, he would have hanged him at the yardarm instant.

On the other hand we know Captain Sir John Berry commanding the *Gloucester*, in his letter to Lord Hyde, describes his pilot as 'esteemed to be one of the best and ablest men to the Northward', meaning that his certificate from Trinity House was for pilotage of ships northward from the Thames only. Further we know for past services he had been granted a commission in 1678 to command His Majesty's Ketch *Deptford*.

Berry who had been bred to the sea from youth up must have been more than a little surprised at 8 in the evening off Lowestoft, when he, the captain of a 62-gun ship, was hailed by the captain of a yacht and asked why he did not tack. That is what Gunman himself would have us believe happened. Perhaps, however, as Sir John says in his letter, it was his royal passenger who asked advice of the yachtsman which was taken, and the ship ordered to make a tack seaward. For the pilot this must have been exasperating, because in such case there could not have been so free an expression of feelings as the occasion certainly demanded; nevertheless, the poor fellow does not seem to have been entirely tongue-tied; he made his protest against what he thought was an unnecessary tack. Again at 9.30 p.m. he said he would stake his life, if the ship were put about immediately, she would come clear of all dangers. The Duke thought otherwise, and ordered that the ship was to carry on for another glass. At 10 p.m. the *Gloucester* came to the starboard tack.

It would be reasonable to suppose that half an hour earlier Aire had been sure of his position: he might still have seen the loom of Lowestoft Light. But there is nothing said in the captain's letter of the position when the ship came round; however, in the log of the *Happy Return*, who kept good company, we find 'had 20 fathoms Lowestoft light bore W.N.W. 5 or 6 leagues, y^e wind at E, a fresh gale and squally weather; we lay NNE.' This course Berry gives also, which (with an alteration to N. at 2 a.m., and at 4 a.m. to N.N.W.) planted the *Gloucester* on to the west end of the Leman Bank at 5.30 a.m.

That tireless reporter Samuel Pepys tells us that when she struck the Duke was in bed and both captain and pilot below. We know Captain Gunman of the *Mary* had left the yacht in charge of his mate, and so far as Pepys knew, with the exception of Captain Wyborne of the *Happy Return*, all commanding officers in the squadron had turned in. Now while the people in the *Gloucester* could have been convinced by the pilot's assurances that they were clear of the Leman, people in other ships could not; their decisions were their own. They each seem to have decided they were clear of the sands, and the captains went below. Only the captain of the *Happy Return* remained on deck with his pilot, who doubtless had warned him of the uncertainty of the position at 10 p.m.—fifteen to eighteen miles off Lowestoft, and that was as near as he, a careful pilot, could give.

James Aire on board the *Gloucester* had been exposed to gross interference in carrying out his

duties during the earlier hours of the night. After the last rebuff at 9.30 p.m. it would not be surprising if the unfortunate man lost interest and fortified himself with brandy, leading him to a rather too happy and hopeful state of mind. We do not know. For, unfortunately, three or four years' search for the minutes of his court martial have been in vain. One thing we may safely assume, there was no charge of treachery; had there been, it would be reflected in the sentence.

As it is clear that a one-time Lord Admiral was ignorant of the responsibility of a captain or the status of a pilot I hope it will not be considered impertinent or presumptuous to here say a word about pilots in general.

While the sailor who used the sea had wide interests limited only by an ever-receding horizon, the pilot's interest was limited to a port or at most a coastline which stood fast. Here as fisherman, or by long experience in coasters, he had gained an intimate knowledge of the waters, learning the waywardness of tidal streams, so putting him on guard against an eddy which might carry him where he did not want to go, or a flaw which might come hustling and bustling down between the hills to throw him flat aback. After strict examination, such a man could be admitted to the Brotherhood of Trinity House and declared fit to take charge of a ship along that coastline and into those havens he knew well. The charts of the seventeenth century were of no use to him. As for the compass, except for general direction, he preferred leading marks: Goodie Winkle's washing in line with the tower of St Nicholas Church led him more surely to the black buoy which he had to find before standing boldly for the harbour mouth. Using all the senses God had given him, by day he went mainly by the look of things; by night, perforce, he felt his way, using mostly the lead as a blind man uses his stick, and having in memory a line of soundings to keep him clear of trouble. His was no nodding acquaintance. And when he came on board a ship to take charge of her in his own waters, any who did not obey the orders he gave concerning her safety, might find himself answerable to a court martial.

There was nothing out of order or surprising in Aire showing deep resentment when Christopher Gunman's judgment was preferred to his. He would have known Gunman as a gallant officer, often trusted by the King to convey and tend, in seasickness and in health, Sir Peter Lely's beauties on a trip down river or across the Channel. He may have known him as a man with an intimate knowledge of the Channel Islands; if he did, he would have known this intimacy would be useless in the safe conducting of a ship in the 12-fathom channel outside Yarmouth Sands, through Haisborough Gat into the Wold, and so clear away northward. There is a passage in Gunman's *Vindication* making one suspect that he had but an imperfect knowledge of these waters.

While doubtless there were several people who contributed to the casting away of the *Gloucester*, the prime mover was James, Duke of York. It would be charitable to think that when he said he had in mind to hang the pilot at the yard arm, it was no more than an attempt to appear tough in the eyes of his son-in-law William of Orange. There is no need to invoke Custom of the Sea, Queen's Regulations, or Admiralty Instructions: it is the practice amongst ordinary decent folk, that if one interferes in a man's work, changing his design, and evil come of it, that one must take the blame. Had the Duke caused Captain James Aire to be put to death, it would have been an act of meanness, unfathomable and unforgivable. Yes, we must be charitable.

It is difficult in the compass of a note to avoid the appearance of being downright when perhaps one intends no more than a gentle questioning. This, and Mr Cowburn's manner of writing, asking for discussion rather than disputation, makes me regret that those interested in this misfortune of long ago cannot be brought together in a convenient place to discuss it over a chart. Besides the chart Captain W. R. Chaplin reminds me there is need to have always in mind the late Dr Muir Evans's article (*M.M.*, Vol. xv, pp. 251-70) on the changes over the years in Yarmouth Sands. While we wait hopefully for that happy meeting of knowledgeable people, we who are less knowing must carry on with what we have.

There is no reason why we should doubt Evelyn's statement that Christopher Gunman was 'a sober, frugal, cheerful and temperate man' without being forced to accept the *Vindication* as reasonable. Those who have had the patience to read through that sad document will have noted how everybody was at fault except himself: Sir John Berry's orders were not explicit, the captains

of the *Dartmouth*, *Ruby* and *Lark* should have been tried by court martial for losing company in the night, Captain Wyborne is found giving 'utterly false evidence', with the mate's wife running about suborning witnesses and getting mixed up with 'Phanatics', and so on. All seems to me evidence of a man suffering from severe shock—a good man gone wrong. And we who lack some or all of his virtues and yet find it difficult to acknowledge error will have sympathy for Captain Gunman who fell from so lofty a pedestal. We must not ignore all the evidence he gives; for instance, Wyborne's evidence as to the lapse of time was incorrect, but who is there when catastrophe or crisis intervenes, who does not fail? Then Sir Richard Haddock, president of the court which tried Aire, should not have opened the proceedings by saying that he 'would pawn his salvation on the pilot were he to go to sea again'. It was certainly not juridical, but it was human.

You will know that in Berry's letter he says Aire's arguments in support of coming to the starboard tack at 9.30 p.m. were '*too long to enumerate*', and he would have probably added, had he time, that they were too complicated to understand. Greenville Collins arrived in the *Humber* to begin his survey of this part of the coast in 1683, so that we may suppose his observations were made about 1684–5, though his *Great Britain's Coasting Pilot*, Part II, was not published till 1693. There is a copy in the Admiralty Library from which were made a few hurried notes. In *Directions to Sail without Yarmouth Sands* we find: 'Being off Lowestoft and that you would sail without the sands, keep about 4 or 5 miles off in 12, 13, 14, 15 and 16 fathoms on the back of the sands'. Later we find: 'There is a brave channel between Yarmouth Sands and the Newark, the narrowest place being between the north end of the Newark and the Calves Knole which is 4 miles and 16, 17 and 18 fathoms between them.' Of the Leman and Ower, he says they are two very dangerous sands, the first not having above 7 or 8 ft. at low water over it and 'steep too having 22 fathoms close to it'.

Perhaps you will think Captain James Aire would have taken the brave deep water channel to the north (which Greenville Collins writes of) had he not been thwarted. Perhaps you will no longer be numbered amongst those who think evil of him.

GREGORY ROBINSON

THE SIDON CARVING

(See *M.M.*, February 1957, p. 77, and frontispiece)

While French lay archeologists may have claimed that the carving depicts a Phoenician ship, I think people more familiar with nautical research at once had her ascribed to the Roman type (see my book, *Navires et Marins*, Vol. 1, p. 76). As rightly pointed out by Mr Rubin de Cervin, she has all the features of a Roman trader of the time, including such particulars as the goose head. There are, besides, signs that the sculptor had some knowledge of Roman monuments.

A comparison between the *M.M.* photograph and the castings in the Louvre and other European museums suggests that the carving has suffered both slight restoration and further wear and tear after the time when the castings were made. There are differences stronger than what lighting and printing may account for. In the *M.M.* photograph, for instance, the braces are neater, and the after end of the planking which shields the rudder no longer shows any erosion. The dolphins in the sea (including the one which an old contribution to *M.M.* likened to the ones in seventeenth-century charts, wormed around a yardstick giving the scale of feet) have become much more confused.

As regards the Paris model, my late friend, Dr Jules Sottas, agreed that his interpretation of the stem head ought to be reconsidered. He had taken it as showing a small platform, and there, in his model, he placed a man on the lookout. I think one should see there just the spatula which is about usual in Roman sailers, while the perfile is subject to some variance. All these yatagan blades (which have survived to this day in certain small Mediterranean craft) may well be distortions of the schematized type of the ancient Egyptian lotus flower.

While the ship is consistent, as a whole, with the Roman nautical iconography of the time, all that we are shown is not to be taken for granted. The sculptor was acquainted with pictures of

ships, but not with ships. As much can be inferred from the upper railings upon the after part of the waist. It includes five rectangular subdivisions. The four foremost are filled with crossed and diagonal bars (quite a Roman arrangement). The fifth shows a system which is not apparent in the *M.M.* plate, but is plainly seen in the Louvre casting; a horizontal cylinder. Nothing of the kind is found in images of Roman sailers, but the explanation is found in galleys, wherefrom this feature has likely been unduly transhipped. The same type of railings can be seen in galleys of the Trajan column, as well as the meaning of the cylinder in the rearmost rectangle. There the handle

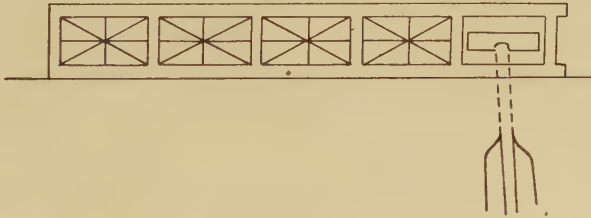


Fig. 1. Scheme of what is shown by Sidon carving. Trajan column, etc., bulwark and rudder systems erroneously placed in same plane.

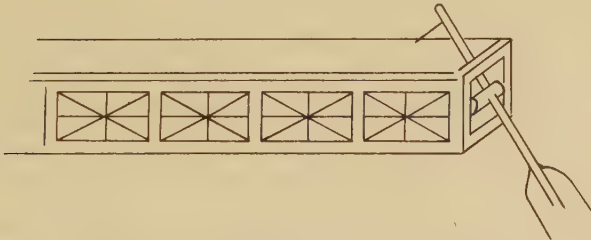


Fig. 2. What it was supposed to show: rudder system through the after face of the parodos.

of the rudder goes through this cylinder which is allowed some rotation around its horizontal axis, much like the 'nut' through which glided the whipstaff of seventeenth-century ships. Of course the Trajan column artist made a mistake in showing in the same plane the railings and the frame supporting the said cylinder. The rudder, as it is shown, would have projected transversally, like a propulsive oar, and could not have worked properly. In fact, the plane through which went the handle of the rudder was a transversal one: the aft section of the talar, the enlarged rectangular platform which accommodated the oarsmen. This is plainly shown in Roman galleys, for instance in the basso relief, from the then Bourbon Museum, frequently reproduced in Jal's works. Showing in the same plan what actually belonged to two perpendicular ones is a not unfrequent practice at the hands of sculptors, illuminators, etc. who used such technical items as ships for decorative or illustration purposes.

Worth notice in the Sidon carving are the quasi-horizontal lines just under the stem head. It is a vanishing remnant of what is shown in full relief in many other pictures of Roman ships. A bold, but vague projection is seen in that place in a number of coins. In the carving from the tomb of Naevoleia Tyche, Pompei, it is shown as a beak, like those in fifteenth-century carracks, but more scrutiny and, likely, more evidence than is available, would be required to form a definite opinion.

L. GUILLEUX LA ROËRIE

This photograph shows the two-spar mainyard to which I referred, *M.M.*, Vol. 41, p. 183. Another, slightly larger and in a different light, of the same ship is reproduced in Moll's *Das Schiff in der Bildenden Kunst*, Pl. Biv, fig. 95. In *M.M.*, Vol. 14, p. 5, is Dr Jules Sottas's article on this Roman ship with his drawings and plans for a model of it, of which there is a photograph. In the same volume, p. 388, is a long note, also illustrated, by Mr D. Verwey, which criticizes some of Dr Sottas's details and especially his scale; replied to by him in Vol. 15, p. 82. Two other details might have been questioned: first, the general shape of the model, which is given a straight keel, instead of the rounded one which is implied here and well shown in other representations of Roman sailing ships, and a flat bottom to match. The ornament at the stem-head, too, is strangely developed into a 'look-out post', by imagining it as hollow and containing a platform. An ornament of similar shape is to be seen in other Roman ships, but there is nothing to suggest that it was other than a decoration in any of these as known to me. The official handbook of the Science Museum on *Sailing Ships*, 1930, follows Dr Sottas in both these details, showing a dotted straight keel beneath the waterline of the Roman Sailing Ship, pl. v, and telling the reader that its stem was 'sometimes prolonged forward so as to carry some sort of look-out post or small fighting castle'.

R. M. NANCE

THE BOWSPRIT AND THE SPRITSAIL

Dr Bowen asks us to believe that the spritsail under the bowsprit had a continuous existence from Roman times and was in fact the *artemon* under a new name (*M.M.*, 1957, p. 62). He even writes that 'we have more evidence here... than in other cases...', but the only evidence that he mentions is the fact that a few seals of about 1300 show a pair of slack lines leading inboard from the end of the bowsprit. The only purpose that he can suggest for these lines, and indeed for the bowsprit itself, is 'hanging a sail', since he knows of no evidence 'that bowlines were used thus early'.

To take this last point first: It is true that in some cases these lines seem to have no obvious purpose, but the seal of San Sebastian shows another line leading from the same point on the bowsprit back to the yard (with its furled sail) a little way in from the end, just where one would expect to find the bowline. This seal is reproduced as no. 14 in Brindley's Catalogue of Seals in the National Maritime Museum and on plate IV of Artiñano's *Arquitectura Naval Española*; the same thing appears rather less distinctly on the seal of Yarmouth (Brindley no. 21). There is also plenty of written evidence for bowlines in the fourteenth century, as can be seen in Mr Tinniswood's table on p. 310 of our volume for 1949, but it is only fair to admit that he agrees with Dr Bowen in thinking that there is no evidence of 'sail-bowlines' at this time. To him both bowsprit and bowline were concerned with catting the anchor (p. 307), whereas Dr Bowen says: 'Certainly they were not there to hang an anchor on.'

If the spritsail was indeed in use throughout the Middle Ages, under what name or names was it known? Mr Laughton once suggested that the 'fokesail', which appears in English inventories about 1430, was a spritsail and that the very doubtful 'water-sail' of the barge *Paul* in 1373 was the same. He was at the time mainly concerned in trying to prove that the 'mesan' was the foremast and had therefore to find some other place for the 'foke'. At any rate, he allowed me to have the last word and this he would not have done if he had had more evidence to offer. The controversy, such as it was, will be found in the *M.M.* for 1928-30 under 'Early two-masted ships'.

Surely we should find *some* pictorial hint of a spritsail between, say, 1100 and 1400, if it existed, even if it were taken inboard when not actually set. Dr Bowen tells us of none and, as far as I know, none has yet been found apart from the slack lines already mentioned and shown to be capable of at least two other interpretations. As for written evidence I can only repeat what I wrote in 1930: 'the earliest references that I have met to spritsails under names generally recognized as having that meaning are in the English inventories of 1485 and in a note by Columbus of the sails carried by the *Santa Maria* in 1492.'

Dr Bowen seems to have overlooked the fact that for several centuries the standard rig for long-voyage Mediterranean ships was that of two lateens, the larger well forward, with no

bowsprit. There *may* have been square-rigged vessels there as well, but we know nothing about them. The square rig had to be re-introduced from the North, and though its origin there may have owed something to Roman influence, it is certain that it consisted at first of one mast and one sail only. By the time the bowsprit appeared all memory of the *artemon* must have been dead and buried.

R. C. ANDERSON

FIVE CHANGES OF NATIONALITY

Almost my first contribution to the *M.M.* consisted of some notes printed in September 1911 on 'the career of various men-of-war which passed through the hands of three or more nations'. Actually I could give no case of more than three *changes* of nationality and in these recapture accounted for one of them. No ship had flown more than three different flags.

In a fragment left by Mr Laughton dealing with the question how far English, French and Spanish designs influenced one another, he mentions a far more remarkable instance. 'In 1707 the French captured several English men-of-war, the largest of which was the *Cumberland* of 80 guns. She was not an old ship, having been built in 1695. After the Peace of Utrecht the French sold many of their surplus ships and especially their prizes to merchants of Genoa, which seems then to have been the principal market for such wares. The Genoese sold her immediately to the Spaniards, who reduced her armament to 70 guns and added her to their navy under the new name of *Principe de Asturias*. In 1718 the English recaptured her at the battle of Cape Passaro; but they did not add her to the Royal Navy, nor did they—from anything that appears in the records—recognize her as an English ship. Two years later they sold her to the Emperor, who, incidentally, managed to avoid paying for her.'

The *Cumberland* was one of the first 80-gun 3-deckers (*M.M.*, 1912, p. 265; 1914, p. 203). These ships had an upper deck formed by joining up the half deck and forecastle of their predecessors, but retained the old distribution of their guns, so that there was a gap amidships in the uppermost line of ports. This arrangement can be seen in the model of the *Chichester* of 1706.

She was taken by Duguay Trouin in the action at the mouth of the Channel in October 1707, but does not seem to have been used by her captors, though Le Conte gives her as belonging to the French navy from 1708 to 1715. Her life as a Spanish ship was very short, since Artiñano's history of Spanish naval architecture puts her purchase in June 1717. After falling once more into English hands she was sent with other prizes to Minorca and remained there until 1720 at least. Pattee Byng's *Journal* (N.R.S., p. 240) shows that the prizes were intended to form the nucleus of an Austrian navy and that it was eventually arranged for some of them to be sent to Naples, which had just returned to Austrian rule. Nothing came of the scheme and it is not at all certain that the *Principe de Asturias* did go to Naples, but it is at least possible that she became the Neapolitan *S. Carlo*, a 70-gun ship described in 1733 as 'worth little'.

R. C. ANDERSON

A MINIATURE FRIGATE OF 1814

The miniature frigate *Royal Louise* given by William IV to the King of Prussia in 1832 has already been mentioned in the *M.M.* (1935, p. 333; 1947, p. 277). She had a predecessor also built in England. In 1814 a small vessel, in form a miniature frigate, was built at Portsmouth and given to the King of Prussia during his visit to England. This vessel left Portsmouth at the end of August 1814 manned by a Lieutenant Inglis and three sailors and reached Hamburg about 16 September. By way of the Elbe and Havel, probably towed, she arrived at Potsdam (Pfauninsel) on 30 September. Here she served as a yacht until 1830, when she was replaced by the new vessel from England and broken up. Her name is not known. Further information about her would be welcome.

F. JORBERG

[O'Byrne's *Naval Biographical Dictionary*, s.v. Charles Inglis, gives the name *Frederick William* and describes her as a 'frigate-rigged boat'.—Ed.]

THE KING AGAINST LUKE RYAN

In the *Mariner's Mirror*, Vol. 43, no. 1 (February 1957), G. Rutherford describes the case of Luke Ryan as 'worth recalling as being an unusually romantic example of the career of a renegade privateer captain in the war of American Independence'. This case was, however, exceptional rather than typical.

Privateer crews were of course from the beginning notoriously cosmopolitan, so that their capture constantly raised the question of the treatment of captured renegades. In 1744/5 an Act clearly provided that such persons might be tried 'as pirates, felons and robbers' under the Piracy Act of 1700, instead of for high treason, in order to hasten their disposal; and it was under this Act (18 Geo. II, c. 30) that Ryan was tried. Many of these captured renegades, however, volunteered to serve in the Navy, and in view of the acute shortage of naval manpower they were accepted, except for those few whose British birth the Admiralty Solicitor felt confident could be proved. Ryan was one of this comparatively small number. But even of these few who were actually committed for trial at the sessions of Oyer and Terminer and Gaol Delivery of the High Court of Admiralty, very few indeed were actually hanged. In the American War sixty were so charged, but nine escaped, seventeen were acquitted, and only one to my knowledge was hanged. The common fate was to be formally condemned, but then reprieved and finally pardoned on condition of serving in the Navy. Thus the striking thing about Luke Ryan and his four fellows is the energy with which the case against them was prosecuted and the government's apparent determination to make an example of them, in view of their notoriety and the publicity their case received. Thus one of them was actually executed, and the rest were reprieved only at the very last moment and after a Cabinet discussion which was referred to the King himself. All this was quite exceptional. (These points are briefly discussed in my article on 'The Treatment of prisoners of war in Britain during the American War of Independence' in the *Bulletin of the Institute of Historical Research*, Vol. xxviii (1955).)

That Ryan finally died as a prisoner for debt is not surprising. The wealth won by privateers and the enormous harm they did to shipping are both legendary. The French *armateurs* regularly attempted to reduce the privateers' share of what prizes were taken to only one-tenth instead of the third laid down by the great Ordinance of 1681; and their ruin and that of the privateering ports was common in each of the eighteenth-century wars. (See L. Vignols, 'La course maritime', *Revue d'histoire économique et sociale*, Vol. xv (1927).) That Ryan in spite of his fame brought comparatively few prizes into Dunkirk may be accounted for by his having ransomed numbers of them at sea, a practice which persisted in spite of severe official disapproval.

OLIVE ANDERSON

THE SPRITSAIL IN AMERICA

In a recent note by the late L. G. Carr Laughton on the Bermuda Rig, there are certain statements regarding the use of the spritsail in America which deserve further consideration.¹ It is stated that 'this sail was certainly not introduced early to any part of America, and never gained a real footing there'. Actually the spritsail is shown in almost all of the earliest views of the major cities of America, where it occurs on the smallest boats. Two are shown in the foreground of the 1717 view of New York, while one is shown in the 1725 view of Boston.² At least eight spritsails are shown in the 1753 view of Philadelphia,³ while two are shown on a 1762 map of the same city.⁴ Howard I. Chapelle has recently shown that the spritsail remained one of the most common rigs in America on small work boats up to the extinction of the sail for such purposes.⁵ Thus it is evident that the spritsail was introduced to America at an early date, and remained one of the most popular rigs for work boats.

RICHARD LEBARON BOWEN, JR.

1 L. G. Carr Laughton, 'The Bermuda Rig', *M.M.*, Vol. 42 (Nov. 1956), pp. 333-5.

2 E. P. Morris, *The Fore-and-Aft Rig in America* (New Haven: Yale University Press, 1927), pls. III-VI.

3 D. B. Tyler, *The Bay and River Delaware* (Cambridge: Cornell Maritime Press, 1955), pp. 18-19.

4 *Ibid.* p. 39.

5 H. I. Chapelle, *American Small Sailing Craft* (New York: W. W. Norton and Company, 1951).

FOR THIS RELIEF

Perhaps Professor Lionel Casson's article, 'Fore and Aft Sails in the Ancient World' has not received as much comment as it deserves. The discoveries it records are among the greatest in Nautical Research, comparable in other fields with the discovery of the Dead Sea Scrolls or of the Rhodesian skull.

The early evidence for the lateen can now be summed up. The relief (*loc. cit.* fig. 5) showing a lateen-rigged fishing boat proves that the sail existed before A.D. 200.

Before this the earliest evidence was the passage in Procopius (A.D. 499-565), quoted by G. Perceval Kaeyl (*M.M.*, May 1956, p. 154) telling that the upper corners of some sails were to be painted red.

It had been suggested before that this was not complete proof because the upper corner might have been that of the triangular topsail for which there is plenty of evidence. (See *M.M.*, February 1956, frontispiece, upper right.). It is, however, unlikely that such a kite would have been carried in action, though possibly the flagship might keep it aloft for distinction. There was just that much reason for doubt.

Now we know that when Procopius wrote the lateen had been in use for a period as long as that which separates the reign of Queen Elizabeth II from that of Elizabeth I. It is therefore unnecessary to pursue the suggestion made by Mr L. G. la Roërie (*M.M.*, February 1957, p. 76) that Procopius should be studied to find whether he tended to stress novelties, or the reverse.

The early spritsails are even more astonishing. Mr John Lynam has commented on them (*M.M.*, February 1957, p. 63) and leaves little to be said. It is perhaps worth noting that the sprits appear to have been carried on either side of the sail. The sprit of a Thames barge is nearly always to starboard.

A. MOORE

THE BERMUDA RIG

In an excellent note on the Bermuda rig in a recent issue of the *Mariner's Mirror*, the late Mr L. G. Carr Laughton makes the following statement:¹ 'In England the shoulder-of-mutton sail was also used as a one-masted rig, especially for ships' long boats. It was then made broader on the foot than the sail used in the two-masted rig, and it was given a small headsail. This rig, first heard of in England in 1545, became common in England during the second half of the seventeenth century.'

Apparently, Mr Laughton refers to a sail with a short headboard as the shoulder-of-mutton, in comparison to the triangular Bermudan sail. Sir Alan Moore uses the term in this sense, and presents a sketch of one of the first examples of this sail on a two-masted rig.² This sketch was drawn from a drawing of a Dutch boat of 1642 published by Chatterton.³ It has always been my impression that this 1642 Dutch illustration was the first known representation of this particular type of sail. I am therefore rather concerned at the date of 1545 given by Mr Laughton, and wonder if it is in error. Unless evidence can be produced to substantiate such a date, we must admit that 1642 is the earliest date for the occurrence of this sail.

RICHARD LEBARON BOWEN, JR.

POLACRES OR POLAKERS

(See *M.M.*, Vol. 43, p. 63)

Mr Dennis's Note on Polacres may suggest to some readers that Falconer's *Dictionary* is entirely wrong in stating that Polacres had no foot-ropes on their topsail and top-gallant yards. As regards French Mediterranean Polacres this may well have been so; but in so far as English Polacres are concerned Falconer, and several nautical lexicographers after him, are quite right.

1. L. G. Carr Laughton, 'The Bermuda Rig', *M.M.*, Vol. 42, November 1956, pp. 333-5.

2. Sir Alan Moore, 'Rig in Northern Europe', *M.M.*, Vol. 42, February 1956, fig. 14, p. 19.

3. E. K. Chatterton, *Fore and Aft* (London, 1912), p. 78.

The Polakers (or Muffies to give them their local name) sailing out of Bideford, never had foot-ropes on their upper yards, and the men did stand on the lower yard to furl the topsail as Falconer states. This was made possible by the fact that the mast being a pole all in one piece, there was neither top nor cross trees and the upper yards could be lowered right down almost on top of the yard below. Moreover, these vessels were very small (as they had to be for navigating a narrow river) and many were less than 100 tons. Their sails and gear were in proportion.

The Bideford Muffies are now a thing of the past; but there are men still living who sailed in them and who can confirm the above statements.

The late Mr Vernon Boyle was an authority on these little ships and has described them in the *Mariner's Mirror* in 1932.

A. MACDERMOTT

THE POLACRE (OR POLACCA) RIG

A letter of 13 October 1909 from the late Leonard Carr Laughton describes a conversation with a Leigh bawley-man who had visited him at Putney. After a talk about the gear of bawleys: 'He also told me that as a small boy he remembered that what he at first called "chasse maree brigs" used occasionally to come up the Thames.' When shown a drawing of a chasse maree 'he agreed that he had the name wrong but promised to remember it if I should mention it. So I tried him with polacca, which he welcomed as a long lost friend.' 'He described them as full brig rigged, with 2 square courses, single topsails, 2 topgallants, 2 jibs and boom mainsail; but the lower, topmasts, and topgallant masts were all in one piece, poles.' He did not know where they came from. 'He saw them perhaps once a month on an average, but that was 50 years ago. (He is 63 or 64 now.) He *thought* they were French, and was certain they were foreign. Their courses had considerable hoist...' 'I showed him the picture of a polacca ship in Lescallier, and he said yes, that was the sort of thing, but he thought his brigs when at anchor left their topgallant yards aloft, though they lowered the topsail yards down close to the lower yards.' [Contractions have been expanded.]

In Robert Wilson's *Journal* (*Five Naval Journals*, N.R.S., Vol. xci, p. 208, H.M.S. Glatton is mentioned as having captured a polacre ship on her passage from Sicilian waters to Malta, in 1807.

A. MOORE

THE MARITIME MUSEUM OF CANADA

Many readers of *The Mariner's Mirror* know the city of Halifax, Nova Scotia, with its magnificent harbour, and some of them have no doubt visited the maritime museum on Citadel Hill. A description of the museum and its contents (unfortunately too long for publication) has been sent to me by Mr Russ Lowndes of Halifax, with whose desire to make the museum better known, to residents and visitors alike, we are much in sympathy.

The older maritime countries such as England, France, Spain, Holland and Italy, with a long history of seafaring behind them and with the resources of ancient archives and great collections to draw on, can well be proud of their splendid museums, full of rare and costly objects of scientific and artistic interest. Younger nations such as Canada and the other great dominions have no such ready-made resources to fall back on when creating an institution of this kind. They have, for the most part, to rely on modern material. Such material however is by no means to be despised, since it is, as in the case of ship models, often very beautiful, and in a few decades will, in its turn, be regarded with as much reverence and interest as the lovely sailing-ship models of 150 and 200 years ago are to-day.

Some types of fishing vessels too, and those of the most handsome the seas have ever known, have all but disappeared within the last twenty or thirty years. The great Banking Schooners, of which the famous Blue nose was surely the queen, are now scrapped, or at best motor driven, with just a rag of a riding sail to replace the noble cloud of canvas that they once spread to the rough Atlantic winds.

It is good that scale models and fine paintings of such lovely ships should be preserved, that posterity may see and admire, and dream of the romance of seafaring that is, alas, fast passing away, never to return.

The Maritime Museum of Canada at Halifax, under the curatorship of Captain C. W. Gilding, is doing a great work in seeking to preserve old logs, records, models, drawings, etc., of contemporary and recent ships, and of collecting marine relics of other days as opportunity occurs.

We wish the good captain every success.

A. MACDERMOTT

QUARTER-DECK AND FORECASTLE BULWARKS

On 30 January 1800 the following Standing Order was issued to the dockyards (Adm. Navy Board, Vol. 2512, no. 399).

‘Having directed you by our warrant of 18 Dec. last to set up and build in your yard a 74-gun ship: these are in addition thereto, and in pursuance of the order therein quoted from the Right Hon. Lords Commissioners of the Admiralty of the 14th of the same month, to direct and require you to cause the forecastle and quarter deck of the said ship to be built up in the same way as is done to the frigates.

‘We further direct you pursuant to a subsequent order from their Lordships of 23rd inst. to cause the Quarter Decks and Forecastsles of all line-of-battle ships that may be built, repaired, or ordered into the harbour to refit to be barricaded as above directed.

‘Respective Officers at *Deptford*.

The like warrant for the latter part to *Woolwich, Chatham, Sheerness*, and to *Plymouth*, and to *Portsmouth*, 24 Jan. 1800, to barricade the *Elephant*.’

A study of the draughts for the years following the date of this order shows that it was carried into effect without exception in the case of new ships, that is of ships ordered to be built after January 1800 or already building at that date. The draughts were altered to the new fashion, the date of the alteration being usually noted on them.

With old ships which came in hand for repair the same practice was usually followed, though it does not seem possible to say with certainty that the alteration was always shown on the draught. Often it was merely pencilled in free hand, very roughly, as an indication or reminder. Some draughts probably (though I have not noted any such) had not even the pencilled indication.

This by no means implies that ships whose draughts do not show the alteration (if any such there are) passed through a repair without having their rails altered to bulwarks. The absence of record in such cases may be explained in either of two ways: (1) The standing order and the method of carrying it out being thoroughly known in the dockyards, particular instructions on this point ceased to be necessary: (2) In several cases it is practically certain that the draught from which the ship was repaired has disappeared. When more ships than one were built to one design, the custom was (as is shown by notes on the draughts themselves) to keep the original draught in the office and distribute copies of it to the yards ordered to build ships after its design. Sometimes the copy was made in London, sometimes the original drawings were sent to the dockyards and the necessary copies made there. Thus, if a ship came in for repair at the port where she had been built, she would find her draught filed in the yard and the necessary alterations would be marked thereon, not upon the original draught in London. Draughts of sailing men-of-war have disappeared from the dockyards, many of them long since, and with them no doubt has disappeared the record of many alterations made in ships when in hand for repair. Thus, although a small proportion of draughts from the yards seems to have found its way back to London, it is certain that a great many did not. Of those which did not, some were destroyed, some found their way into private hands.

In the case of the *Victory*'s repair of 1802-3 it is certain that there must have been important alterations made in the draught from which the work was done; for, besides other alterations, the ship's stern was radically altered, the old open galleries and ornamentation being swept away and a plain close stern substituted. No draught showing this alteration is now known to exist; the evidence that it was made consists in written records and unofficial drawings. It is also certain that, when in 1802 the project of lengthening the *Victory* as a 110-gun ship was entertained, a draught

must have been got out to illustrate the change. A model was made showing the ship in her proposed new form and that model survives in the museum of the Royal United Service Institution. It shows her with a close stern, slightly different from that which she now has, with high bulwarks as ordered in January 1800 and with the old form of head.¹

There is, however, some official record of the alteration of the *Victory*'s quarter deck and fore-castle; a profile of 1783 shows the new form of bulwarks roughly pencilled in without date. This pencilled alteration actually shows the poop with raised bulwarks as well as the quarter deck and fore-castle; but, since the standing order did not apply to the poop and since there is reason to believe that all poops were not barricaded at this date, it is permissible to suppose (as has indeed been supposed) that high bulwarks were not at this time added on the *Victory*'s poop.

It does not seem permissible to suppose that her fore-castle was not barricaded at this time. The standing order was definite that it should be so altered as well as the quarter deck at the first opportunity, and such an order, an Admiralty Order put into effect by a Navy Board warrant, could not be set aside with nothing said. But the written records of the period do not show that any representation was made in favour of exempting the *Victory* from the order. Indeed I have found no record of any kind of any petition against the order and believe it to have been carried into effect without the slightest question or opposition. It is only reasonable to suppose that the increased protection given by the high bulwarks would be universally appreciated and welcomed.

At present the *Victory* shows her quarter deck altered to the new mode, but her fore-castle left in the old fashion. There is no record that any ship was partially altered in this way; the records invariably show that, when the alteration was made, it was made to both quarter deck and fore-castle alike.

It is perhaps worth noticing that Nelson was by no means a man enamoured of old fashions as such. When a change which promised to be beneficial was being introduced, he was foremost in demanding it for his flagship. Thus the *Vanguard*, his flagship at the Nile, was fitted by his special request with a close stern, being the first 2-decker so fitted. And at Copenhagen, when he transferred his flag before the battle, he shifted to the *Elephant*, a new ship with high bulwarks, as may be seen from the text of the standing order of 30 January itself. These considerations make it reasonably certain that, if Nelson had wished the *Victory* to be completed for his flag without high bulwarks to her quarter deck and fore-castle, he would have said so. But he did not; when asked to suggest any alteration that occurred to him, he sent in merely a request about the blinds in his cabin.

L. G. CARR LAUGHTON

'SHORE' LEAVE

(See *M.M.*, Vol. 42, p. 234)

The short answer to Commander H. Mead's query whether 'shore leave' is a true naval expression is that it depends what you mean by a true naval expression.

Although 'on a ship' always was and is anathema in the wardrooms of H.M. ships, it was quite common on the lower deck between the wars (not to mention the U.S. Navy and much of our own merchant Navy) and regular usage amongst the public. By the end of the war, the Royal Navy was diluted by something like 7 or 8 to 1, and such expressions naturally were much more widespread.

I think 'shore leave' comes in this category. There was never any question of piping anything but: 'Leave to the port watch from . . . to . . .' unless 'Canteen leave' was granted to the non-duty part.

Incidentally, I have always felt that the achievements of the Royal Canadian Navy, with a wartime dilution of the order of 50 to 1, have never been properly appreciated.

Finally, I would suggest that the novel referred to shows such abysmal ignorance that we need not take it too seriously. It certainly is not evidence.

P. W. BROCK

1 A half model in the National Maritime Museum (no. 1765-5) shows the *Victory* with her old dimensions and form of head, but with square bulwarks to the quarter deck and fore-castle.

R.C.A.

THE 'MAHONA' IN BRUEGEL'S PRINTS

If my objection to the identification of Bruegel's 'sea-monster' as a mahona (*M.M.*, 1956, p. 172) was even partly due to my failure to follow the reasoning in a language not my own, I must apologize; but now (p. 331) Mr Buyssens has put his views so clearly and so tersely that there is no possibility of misunderstanding. 'Only the mahona satisfied the fourfold condition of having a hull resembling that of a galeass, of not being propelled by oars, of having the rig of a nao or a galleon and of being used by Moslems and Spaniards alike.'

The vessels in the prints certainly comply with the second and third of these conditions by having the normal square rig of the time and showing no sign of oars, but the position as regards the first and fourth is very different. I presume Mr Buyssens is thinking of Mediterranean galeasses—the adjective is important—and I can see very little resemblance between these ships and any representations of such galeasses in the sixteenth century or at any other time. As I said before, we know what Venetian and Spanish (or rather Neapolitan) galeasses were like and that was not in the least like these ships of Bruegel's.

A few references may be useful. Bruegel's ships are shown in drawings by Mr Nance on p. 99 of the *M.M.* for 1913 (figs. 1 and 2). Galeasses of Lepanto appear in his figs. 14 and 15 (p. 102), and there is one of slightly later date, drawn by a Genoese artist, in the plate facing p. 115 of the 1949 volume; while a Venetian merchant galley, from which the fighting galeass was derived, can be seen on p. 144 of the *M.M.* for 1945.

The fourth condition is that the vessel should be one 'used by Spaniards and Moslems alike'. For this Mr Buyssens refers to Veitia, but all that he tells us, writing in 1671, is that a galeass was at one time ('antiguamente') called a mahona and was a combination of ship and galley. He says nothing about oars one way or the other, but the fact that he mentions the galeass in one sentence with the galley and the brigantine, which he describes as a small galley, suggests that it was an oared vessel, as indeed we know it to have been in his time. Mr Nance pointed out in 1919 (p. 24) that Pantero Pantera is the only authority for depriving the mahona of oars, although he had just described them as resembling Venetian galeasses, which he must have known as using oars. If it were not for the undesirability of emending a text to suit one's own views, I would suggest that a word has been omitted and that he wrote 'they do not go well under oars', not merely 'they do not go under oars'.

The fact that Pantero Pantera expressly mentions Venetian galeasses must be emphasized, because there were northern ships of the same name in Bruegel's day and these were by no means unlike his 'sea-monsters'. Henry VIII had a number of ships classed as galeasses, although according to Anthony Anthony—not, it must be admitted, an altogether satisfactory authority—it was only the last four of these, built in 1546, which were designed to use oars and had any resemblance to their southern namesakes. The others were very much like normal 'ships' of the time, but without projecting forecastles and with galley-fashion beaks carried lower down on the stem. One of these, the *Anne Gallant* of 1545, is shown in Corbett's *Drake and the Tudor Navy*, Vol. 1, p. 27, another, the *Salamander*, appears on p. 41 of the *M.M.* for 1914. This ship had been given by Francis I of France to James V of Scotland in 1537 and captured in 1544. If we allow for the fact that Bruegel was a real artist and Anthony not even a fair draughtsman, their ships may well have been very similar.

Now Bruegel shows the 'sea-monster' from only two points of view, either broadside on or four points on the bow, and it appears in exactly the same two poses in other representations. If we turn again to Mr Nance's page of drawings in 1912, we can find his nos. 5 and 6 in Bruegel's larger-scale print (Bastelaer 105 or Buyssens 2), his no. 4 as the right-hand 'mahona' in the Messina battle (Bastelaer 96, Buyssens 1) and—as an extra—the stern view in his no. 3 as the ship on the extreme right in the same print. Only no. 7 shows much variation, and even it may be based on the same original as no. 5. What is more, in every case left and right are reversed, as one would expect to find where one engraving has been copied from another. There are certainly differences in detail, notably in the amount of sail set, but to me it seems more than probable that all these 'sea-monsters' are due directly or indirectly to Bruegel.

Mr Buysens has pointed out that Bruegel lived in Antwerp and would have plenty of ships to draw from without having to turn to a model. This is true enough, but I still think that the three views of a ship with cockbilled yards, whether drawn 'from the life' or from a model, were made from the same original. This is only a small point, but the reminder that Bruegel's home was in Flanders is welcome as helping to explain how he came to draw what I believe to be an English or northern French 'galeass'. There still remains the question whether he was justified in including ships of this type, one on either side, in a picture of a battle in the Mediterranean, supposing that such a battle actually took place.

R. C. ANDERSON

ON THE NOTE RE 'CHECKED IN'

(See *M.M.*, Vol. 42, p. 323)

Is there not some confusion here? In Griffen's nautical series, Mackenzie, in his *Practical Mechanics Applied to the Requirements of the Sailor* (5th edition), states, on p. 106, that for a given angle of incidence the propelling force increases and the leeway force diminishes as the yards are checked in.

Conrad wrote: 'The brig, her yards slightly checked in ran with an easy motion under the tops'l, jib and driver. . . .' Four paragraphs back the order 'brace up for the port tack' was given. Three paragraphs back the brig was 'running off a little now'.

In other terms they had in the meantime braced 'back' slightly. The sails now made a greater angle with the keel. Checking in refers to the weather brace and therefore the ship is eased. In a fore'n'after the *sheet* is checked.

EWING MCGRUER

LORD KEITH, 1797-1799

While reading through the Spencer Papers at Althorp, to which I was very kindly given access by Lord Spencer, I made certain discoveries about the career of Lord Keith which may be interesting.

As is known, he was in command of the naval forces which gained and held possession of the Cape of Good Hope in 1795 and 1796. He returned home at the end of the latter year, becoming briefly involved in the French expedition to Bantry Bay, and on 7 March 1797, as a reward for his services at the Cape, he was created a baron in the Irish peerage. Shortly afterwards he was employed in dealing with the mutiny at the Nore, and was so successful that at the beginning of July he was sent to cope with that at Plymouth, flying his flag in the *Queen Charlotte*, which had been the centre of the Spithead mutinies.

He must, it appears, have made a name for himself, and clearly was aware of his merits. On 20 July he wrote to Spencer, the First Lord, suggesting that as a further reward he might now be given an English peerage. Spencer was, one gathers, a little taken aback, and it was ten days before he replied that he thought the request a little premature.

That was the end of this episode, but more trouble soon blew up. In the autumn of 1797, where Keith had for some months been third-in-command to Lord Bridport and Sir Alan Gardner in the Channel Fleet, another senior officer arrived. This was Sir Charles Thompson, sent home from the Mediterranean as the result of a famous collision when he questioned St Vincent's order to hang some mutineers on a Sunday. He was posted to the Channel, where there was some shortage of flag officers. Keith did not take kindly to the situation, which he asserted amounted to demotion, and would discredit him in the eyes of the Fleet. He claimed that he had been promised his place in the hierarchy of command, and said that being deprived of it he had no choice but to resign.

The First Lord, quite correctly, did not enter into any argument, but allowed Keith to cool his heels on the beach for a while. No admiral liked doing this in wartime, when honour and prize money were to be had, and on 15 February 1798 Keith asked to be sent to the Mediterranean. Spencer at once answered that he had only himself to thank for being out of service, and that there

was no vacancy in the Mediterranean. To Keith's further argument that he had been promised third place to Lord Bridport, and but for this would have preferred to stay at the Nore, Spencer merely replied that he could not possibly engage himself on such matters, or employ an admiral on conditions.

These matters rested for some time, but the First Lord's good opinion of Keith was evidently not affected, and when the latter withdrew his stipulations he was willingly re-employed, and, at the end of 1798, sent to the Mediterranean. St Vincent was in bad health, and Keith apparently left Spencer with the impression that he hoped his new Commander-in-Chief would shortly avail himself of a conditional leave of absence, and bequeath him the command. Spencer wrote to him on 3 December, saying he now heard St Vincent was not coming home. Keith, not unnaturally, replied that the thought had never entered his head.

In any event, as is known, he did succeed to the command in June 1799, and, after a brief return home in chase of Admiral Bruix, took it up again in December. What does not appear to be so well known, although the evidence is in one of Keith's letters to his sister preserved at Greenwich, is that at the end of August 1799 Spencer, visiting Torbay, offered him the command of the Channel Fleet after Bridport had been dispossessed. Keith declined on the grounds that he preferred the Mediterranean climate.

None the less, he was Commander-in-Chief on that station sixteen years later, and it was to one of his ships that Napoleon gave himself up.

R. C. SAXBY

CLOVE-BOARD

Clove-board occurs in many accounts from Edward III to Henry VIII and is also called *English board* or, more commonly *ship-board*. Enormous quantities of it were used and it was commonly bought wholesale from dealers all over the country. The regular practice seems to have been that, when a ship was to be built or repaired, the quantity estimated to be necessary was contracted for at once. If a further supply was needed and was not forthcoming locally, it was made by the men employed on the building of the ship; and since the making of clove-board was not their trade, what they produced was not clove-board, though of course of the same dimensions. The only objection to obtaining boards in this way was that it cost more.

Evidence ranging from the accounts for the galleys of 1295 to the actual remains of the *Grace Dieu* of 1416 shows us that this board was usually in very short lengths. In the *Grace Dieu* it was 12 in. by 1½ in., the middle thickness of the triple strake being sometimes almost feather-edged. This was probably an unusual feature, found only in ships of the largest size and probably not before the reign of Henry V. Other large ships probably—almost certainly—had their strakes made in two thicknesses of clove-board, and it is hard to say when a ship was considered small enough to need only one thickness. In the main this is a question of length; one would suppose that a galley, which was at least as long as a ship, would need two thicknesses to get the necessary girder strength. The very large number of short boards bought for the galleys of 1295 tends to prove that their strakes were worked in two thicknesses.

Assuming that clove-board means board which has been cloven instead of being sawn (like the thin slats still used for garden fencing), it is at first difficult to see how such board could be used for shipbuilding. One would expect the cost of planing or dubbing to be prohibitive, and yet all the work on the *Grace Dieu* appears to have been done with an adze.

Some useful information is contained in the particulars of John Chamberlain's accounts for 6–7 Henry IV (1404–6). The Abbot of St Alban's gave 40 oaks to the King and they were converted on the spot into ship-board by workmen called *clovyers*. From these trees they made 1200 boards and the bill for carriage shows that these boards weighed in all 24 tons. At the same time the Abbot of Waltham gave 10 oaks and these produced 390 boards weighing 12 tons.

In the first case we have 50 boards to the ton and in the second 32½, making the weight of single boards 45 lb. and 69 lb. respectively. If therefore these boards were of the same scantling, the longer were nearly half as long again as the shorter. As the length of none of them is stated, it

becomes necessary to see what may be inferred from known facts. We know that the oak was worked green and that the weight of green oak is 56 lb. to the cubic foot. We know that in 1416 ship-boards were 12 in. wide by $1\frac{1}{2}$ in. thick; and that in 1295 a great many of them were 8 ft. long.

Now a board of these dimensions, 8 ft. \times 1 ft. \times $\frac{1}{8}$ ft. contains 1 cu. ft. of timber and weighs 56 lbs. The boards in Chamberlain's account, if of the same scantling, must have been some (1200) shorter and the rest (390) longer than 8 ft. The actual lengths would be approximately 6.4 and 9.9 ft. These are possible lengths, but it is also possible that the 1200 were less than $1\frac{1}{2}$ in. thick and the 390 considerably more, in which case they also might be about 8 ft. long. We know that in the Gokstad ship a thick strake was worked at the turn of the bilge and we find the same thing in Henry VII's clench-built 'barks'; it is reasonable to suppose that the same practice was followed in the intermediate centuries. There is also a probability that the garboard strake may have been heavier than the rest.

As to the cost of this clove-board or ship-board: in 1405 it took 10 clovyers at 6d. per day 10 days to make 1200 boards; i.e. each man made 12 boards a day and a board cost $\frac{1}{2}$ d. for labour. The 390 larger boards were made in 40 man-days, so that the output was $9\frac{3}{4}$ boards per man per day and the cost slightly less than $\frac{3}{4}$ d. per board. If the boards were all the same length and width and differed only in thickness, the cost of splitting and dubbing them would not vary appreciably. But in this case the cost of labour varies approximately as the length would vary, supposing all the boards of the same scantling. It may therefore be decided that the boards were of two lengths, roughly $6\frac{1}{2}$ and 10 ft.

The accounts for the galleys of 1295 vary as much in form as commodities did in price; there was also a good deal of difference in the practice of different ports. At Ipswich, for example, only two lengths of board were used for the galley, 12 ft. at $5\frac{3}{4}$ d. per board and 8 ft. at 1.8d. per board. For the barge 12 ft. boards at 5.6d. each were used and others at 5d., 2.5d. and 2.08d. each. It will be noticed that the cost of a 12 ft. board is three times that of one of 8 ft.; the only possible explanation is that the 12 ft. boards were sawn and the 8 ft. cloven.

It is doubtful if the Southampton galley can be brought into this comparison except that it seems to suggest that occasionally clove-board might be had of as great a length as 12 ft. There were used a dozen 12 ft. boards at 4d. each and 40 of 14 ft. at 9d. each. The difference in price seems to be too great to be explained save on the supposition that the 14 ft. boards were sawn and the 12 ft. split and dubbed. The cost of materials for this galley was high and most of the board used was in great lengths, of 27 and 24 ft. at 2s. and 1s. 8d. each respectively. The 12 ft. boards cost per foot run only two-fifths of the price of those of 24 ft. In addition to these long boards a great many *minute borde* were bought for this galley; there is no detail of their size and cost and it can only be conjectured that some at least of them may have been clove-board of the usual short lengths.

The Newcastle galley shows much detail, but does not help as much as might be expected. For her some long boards of 26 ft. were used costing 8d. and 8.4d. each and a considerable number of smaller boards at from 1.2d. to 3d. each, of which some were for building the barge and some for repairs. Probably most of these were clove-board. But the galley herself seems to have been berthed up with elm, of which no fewer than 1770 boards were bought at 1.3d. each. This item is particularly difficult, because the cost seems impossibly low for sawn boards and elm is not a timber which can be split into boards. Part of the explanation probably is that elm timber cost next to nothing. In any case boards at such a price must have been short, but why boards sawn from elm trunks should be short does not appear. There were also boards of 'Murref', which is supposed to mean pine from the Moray Firth, at $3\frac{1}{2}$ d. and $4\frac{3}{4}$ d. each. It is noticeable, down to a fairly late date, that fir boards are more expensive than oak, the reason probably lying in their having to be sawn. Fir spars, except when of large size, were cheap enough.

It is likely that some quantity of ship-boards was made of beech instead of oak, for beech is a timber that splits well and is suitable for use in the under-water body of a ship.

In the barge *Paul* there were 50 *clowes taleghw*: which Moore explained, very plausibly, as bundles of firewood. The item comes among miscellaneous gear, much of it for store, and it is by no means impossible that it might mean trenails, for nails are often called *clowes*. There was a

case about 1400—to quote from memory—where some blocks had been supplied to lay a ship on for repair. These were evidently found to be good straight-grained stuff and presumably seasoned, since they were split up and converted into trenails.

There are other instances where short straight stuff was split up for various purposes. For instance, in 1307 'Di.C. de Talwode empt' . . . ad faciend' bollardes pro dicta bargia, iij. s. vjd.' How the hundred was measured is uncertain. At any rate, it can be seen from this that a good deal of tallywood (there are many spellings) could be bought for 6d. and that it was generally useful. Probably the mysterious *Clone* in the Newcastle galley accounts is nothing but *Clove* and stands for tallywood, to be used for any odd purpose.

This note began with a suggestion that the use of clove-board ended before 1550, but it seems to have survived much longer in some places. In *The Russian Fleet under Peter the Great* (N.R.S., pp. 95–6) we find the following: 'All other tools (than the hatchet) are of late date amongst them (the Russians) and still by many accounted foreign; up in the country none to be found, for as they have plenty of wood they want no saw to make boards, but splitting the timber, hew it to a convenient proportion. . . .'

L. G. CARR LAUGHTON

WIRE RIGGING

In the *M.M.* of 1923 a questioner asked for the date of the introduction of wire rigging. No answer was forthcoming, but a Note in 1946 happened to mention that in 1855 a Bristol ship fitted with Cunningham's topsails had wire standing rigging. According to Laird Clowes in Vol. 1 of his *Sailing Ships*, 'wire standing rigging was first employed in 1851 and quickly became common in the larger merchantmen. Before the innovation reached the Navy, however, sailing men-of-war had long become obsolete.' This is true enough, but the Royal Navy does not seem to have been so very far behind. Bunbury Gough, writing of the Royal visit to Canada in 1860, says: 'We did not lay so close up to the wind as the *Ariadne*, the reason being that the *Hero* had hempen shrouds, the *Ariadne* wire ones.' This reference comes from Laughton's notes.

R. C. ANDERSON

QUERIES

16. (1957.) SWEDISH SHIPS SOLD TO COLOMBIA. In 1825 the two Swedish ships *Tapperheten* 64 and *Af Chapman* 44 were sold to Colombia, or rather to the insurgents in what afterwards became Colombia. Did they ever reach their new home and what happened to them afterwards?

R. C. ANDERSON

17. (1957.) GERMAN TIMBER FOR THE BRITISH FLEET. In the course of a study of the 'Grüne-wald', an extensive wooded district in Western Berlin, I happened to discover that in the period 1740–60 the greater part of this forest of ancient oaks was sold to an English company. Deliveries must have been very extensive, since a map of about 1750–60 marks the district as 'deforested'. The timber was taken by water down the Havel and Elbe to Hamburg and thence by sea—possibly in rafts—to England, to be used exclusively in the building of men-of-war.

I should be glad to know more about this transaction. Has anything been published about it?

F. JORBERG

18. (1957.) MONK'S 'LEFT WHEEL'. Somewhere I have read that Monk in his early days at sea gave the military order of 'left wheel'. Where was this and on what early authority was it based?

R. C. ANDERSON

19. (1957.) CREMER OR CREAMER. Can anyone supply any information about a Captain Cremer or Creamer who was master of a Cork-owned cargo sailing vessel in the 1860's and was lost with his ship in that period on a voyage from Cork to North France? J. DE C. IRELAND

20. (1957.) KILLALA. Has anyone any information about the port of Killala, Co. Mayo, in the eighteenth century, in particular about a local privateer of the name of Murphy who was apparently operating on behalf of the French in 1798, and of the seizure—mentioned by Arthur Young in his *Tour of Ireland*—by the French raider Thurot during the Seven Years' War of the only Killala-owned merchant vessel of the time? J. DE C. IRELAND

21. (1957.) H.M.S. *ACASTA*. Can any classical member tell me why a ship should have been named *Acasta*? My classical dictionary tells me the story of Acastus, son of Pelias, king of Iolcus, one of the Argonauts, but nobody can explain the word *Acasta*.

The first ship to bear the name was a 40-gun, 5th rate, built at Wells's Yard, Rotherhithe, in 1797, and two destroyers have borne it since, both with distinction. T. D. MANNING

ANSWERS

3. (1929.) CUTTER BRIGS. A letter of Carr Laughton's of 5 May 1919 has: 'Cutter brigs are rather interesting. There must have been a fair number of them; but as it wasn't a "substantive rating", they figure in the lists merely as brig sloops, and references to their being cutter built only turn up incidentally. *Orestes* and *Pylades* were both taken from the Dutch in 1781. Our MS. list [viz. the Admiralty's] gives them as 399 tons, the biggest brigs in the service. James Anthony Gardner served in *Orestes* (see pp. 56 *seq.*¹), which he describes as drawing 17 ft. 4 abaft and 13 ft. 4 forward, and as being fast but "a wet soul". I don't think any of the cutter brigs were clinker built. The "cutter" element in them was represented by the wedge-shaped section and deep draught. I remember seeing somewhere (about 1800) or so, a plea for building all men-of-war on a similar model to improve their sailing. This was of course what Symonds did later on, being credited with originality for so doing. But as you know, that form of section can be traced a long way back, certainly to Charles II's time. (I think it's in Fortree), and quite probably much earlier.'

Robert Wilson recorded a Venetian cutter brig in 1806 (N.R.S., Vol. xci, p. 150). Also a Russian cutter brig, p. 150, bound for Malta, in 1807. Perhaps these were brigs with a fore and aft sail on the ensign staff, the only sort of cutter brig mentioned by Smyth. A. MOORE

17. (1950.) PHOENICIAN SHIP. The following extract from the German *Polytechnisches Journal* for 1820 (p. 373) throws some light on the question asked by Mr Stuart Bruce:

'A discovery of the greatest historical interest was recently made in the neighbourhood of the Cape of Good Hope. When digging out a cellar a workman found the hull of an old ship built of cedar; this is believed to be the remains of a Phoenician galley. Provided the report is correct, there can be no doubt that the daring seamen of Tyre reached the southern point of Africa, and if so we may certainly assume that they sailed the Indian Ocean also.'

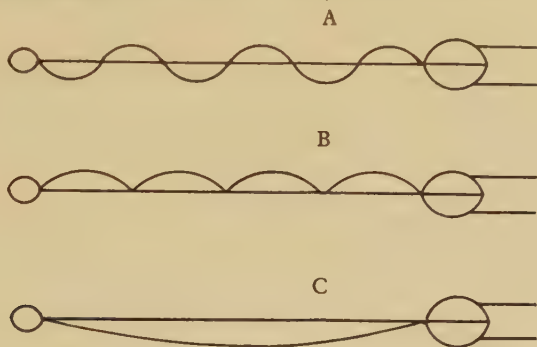
A note adds a reference to *Philosophical Magazine*, April 1820. This I take to be an English periodical, but it is not to be found in Berlin. Can any reader, especially in South Africa, confirm the story of the original discovery and say what happened to the remains?

F. JORBERG

¹ *Recollections of James Anthony Gardner*, N.R.S., Vol. xxxi.

1. (1957.) PREVENTER BRACES. Steel's 'war only' preventer braces, which he describes as leading through a block lashed to the yard and to the bowsprit cap for the fore yard and the fore shrouds for the main yard, were evidently the same as those authorized as normal fittings in 1803 (*M.M.*, 1924, p. 192).

The point about his blockless preventers is that they were too short to be anything but pendants. They are always listed as needing only 1 fathom more for a pair than the ordinary brace-pendants and would reach only about half way down to the deck. The way in which the list is set out: 'Braces—Pendants—Preventer', not 'Preventers', suggests that what is meant is 'preventer pendants for the braces', i.e. supplementary pendants which would do the work of the ordinary pendants, if these were damaged.



Quite a number of prints and drawings of the mid-seventeenth century show brace-pendants in two parts, one tight and one slack. They appear in three variations, A, B, and C, in the accompanying sketch. A occurs several times on the lower yards of the French and Spanish prizes of 1747 in the well-known series of prints, with C on the topsail yards. B is how two Spanish manuscripts of about 1750 show the arrangement, and C can be seen in a Danish rigging-plan of about the same date and in one of Ozanne's small engravings of slightly later. So far I have only found two British examples, both of form C. One is on the main brace of the yacht *Caroline* in one of the 'prize prints' already mentioned, the other on the main brace—not on the fore—of an etching of 1809 reproduced in *The Macpherson Collection*, but I have no doubt there are others. Form A, by the way, appears in a picture by Pocock dated 1808 on the main brace of a Spanish prize

Now this arrangement demands just what Steel suggests, supplementary pendants slightly longer than the regular kind. How they were fitted is beyond me; it would be simple enough to have a pendant in the form of a very long strop with a seizing at the yard-arm and another at the block with one part left slack, but this would involve a single rope, whereas Steel's preventers are always slightly thinner than the ordinary pendants. One can imagine two eye-splices at the yard-arm, but what happened to the thinner and slacker rope when it came to the block? This is a question which I cannot answer, but I do think that my explanation of what Steel's preventer-pendants were is probably correct.

R. C. ANDERSON

15. (1956.) THE YACHT *NANCY DAWSON*. In the Naval Maritime Museum at Esquimalt, British Columbia, there is a water colour showing H.M. ships *Herald*, *Plover* and the yacht *Nancy Dawson* off Wainwright Inlet with a number of smaller boats. These formed the expedition that was searching for Sir John Franklin's ill-fated party. The date given is 25 July 1849.

According to Mr F. G. G. Carr, of the National Maritime Museum, this picture is thought to have been painted by Lieutenant William Chimmo, R.N. A copy of it appears as an illustration in his book entitled *Euryalus: Tales of the Sea, a Few Leaves from the Diary of a Midshipman*, published in 1860.

H. F. PULLEN

4. (1956.) BOUNCING CANNON-BALLS. An account of ricochet firing is given by S. Beauchant in his work, *The Naval Gunner* (1828). The writer says that ricochet firing was the most annoying and destructive form of cannonading, but the least practised in the English Naval Service. The method was to use a powder charge of one-third of the weight of the shot and to aim the gun point-blank or at an angle of elevation up to 2° . The object was to keep the shot as close to the surface of the water as possible; with a 24 pdr. at 1° elevation the first graze would be at about 800 yards and the extreme range 2500 yards, the greatest height above the water after the first graze being 21 feet, and lessening with every subsequent graze. Beauchant says that it was a highly effective form of gun-fire against small craft, but a smooth sea was essential, for if the round shot was met by any swell it would tend to rise at a great angle, plunge, and disappear.

A. B. RODGER

16. (1956.) DAMPIER'S *ROEBUCK*. This ship may have been unsound when she left England, but she could hardly be called 'old', since she had been launched barely 9 years before then. 'Unseaworthy' seems also a rather drastic epithet for a ship which could sail more than three quarters of the way round the world before coming to grief.

R. C. ANDERSON

7. (1957.) VICE-ADMIRAL DE COURCY. Marshall's *Royal Naval Biography*, Vol. 1, p. 332, gives quite a long notice of this officer, who died as Admiral of the Blue in 1824, but treats his command in South American waters very briefly, merely telling us that 'on his arrival at Rio Janeiro (in the *Diana* frigate) he hoisted his flag in the *Foudroyant* of 80 guns, where it continued until his return to England in 1812'.

The *Foudroyant* was indeed present at the action in which the *Hoche* was taken, but was certainly not wrecked near Montevideo in 1810; she survived until 1897, when she was lost off Blackpool.

The Admiral was the Hon. Michael de Courcy, son of Lord Kingsale; it was he who was in command of the *Magnanime* in 1798.

R. C. ANDERSON

9. (1957.) ORIGIN OF NAMES. I have been able to turn up the old forms for 'Shipwash' and 'Newarp' but do not know them for 'Dogger', 'Dowsing', 'Gallop', etc.

SHIPWASH. On a chart in the Cotton MSS. (British Museum), temp. Elizabeth I, this is shown as *Sepis washe*. It looks like a compound word from O.E. *scaep-waesc*, a place for washing sheep. Tradition has it that this sandbank was once dry land, perhaps forming part of the submerged East Anglian coast. NEWARP. This is *New Warp* on the same chart, from Old Norse *varpa*, to throw, i.e. a sandbank newly thrown up.

DOGGER probably comes from the Danish *dogger*, codfish, or from a type of Dutch fishing vessel. DOWSING, on the face of it, appears to be connected with the word *dousing*, perhaps referring to a sandbank which plunged into the sea as a result of erosion. LEMAN & OWERS I would not like to guess. GALLOPER is difficult, failing the old forms. Could it be from O.E. *calu*, bare, which gives *Gallow* in East Anglia, hence a bare sandbank? DUDGEON, amongst other meanings, is a dagger. Could this be the shape of the bank?

W. G. ARNOTT

9. (1957.) ORIGIN OF NAMES. Newarp is the new warp or sand (A.S. *Weorpan*). Grenville Collins's charts of 1690 give 'New wark'. The first lightvessel on this station dates from 1790. H. Muir Evans's *Short History of the Thames Estuary* (n.d., c. 1936) summarizes the origins of sand names and suggests that physical form and shape are the explanation of Spile, Girdler, etc. Gallop and Leman may originate in this way. W. G. Arnett thinks Shipwash may derive from 'sheep-wash', see *Alde Estuary* (1952), p. 23. Dowsing is probably a personal name; Dowsing or Dowsinge was formerly the name of a small island near Havergate Island, R. Alde.

PHILIP KERSHAW

18. (1956.) SURGEONS AT SEA. *The British Fleet*, by Commander Charles N. Robinson, R.N., published by George Bell and Sons, London, 1895, contains many references to surgeons in the R.N.

F. C. RHODES

REVIEWS

THE NAVAL OFFICER'S SWORD. By CAPTAIN HENRY T. BOSANQUET, C.V.O., R.N., F.S.A. Her Majesty's Stationery Office. 1955. $8\frac{1}{2} \times 7$ inches; vi+240 pages; 40 figures. Price 2 1s.

The collection of naval officers' swords at the National Maritime Museum was being formed quite haphazardly until the late Sir Geoffrey Callender asked Captain Bosanquet to arrange and catalogue the collection. The catalogue being reviewed is the result of his labours, and will prove of great use to all interested in the naval officer's uniform and personal weapons. The book has a much wider interest, for in his introduction Captain Bosanquet traces the history of the sword in general, and of the naval officer's sword in particular, and he goes on to present a detailed description of the different swords and dirks in the museum's collection. It is interesting, even disappointing, to note how often research has proved wrong, or most unlikely, the treasured family tradition that such and such a sword formerly belonged to such and such a naval hero. But Captain Bosanquet is never captious in his decisions; in each case his are logical conclusions formed as a result of laborious and most exacting research.

His exacting methods are made evident in Part III of the Catalogue, a list of Swordsmiths, Sword-Cutlers, Goldsmiths and Jewellers, Gold and Silver Lacemen, Naval and Military Tailors, Outfitters and Accoutrement Makers who worked in London between 1670 and 1850. This list is completed by similar information compiled for Birmingham, Chatham, Edinburgh, Plymouth, Devonport, Portsmouth, Portsea, Landport, Southsea and Gosport. It will be noted by librarians and historians that Part III carries the interest of the book outside the confines of a single museum's collection.

It happens that at present less than a dozen swords in the museum's collection are pre-Trafalgar. The Admiralty did not introduce a standard pattern for the naval officer's sword until 1805, when the sword was already losing favour as a fighting weapon and had long ceased to be worn as part of the everyday dress of the gentleman. After 1815 the naval officer was called upon to do little hand-to-hand fighting and therefore few swords at Greenwich can have drawn blood in battle. This is disappointing to little boys. But the names of Bligh, Cunningham, Duncan, Fremantle, Hood, Nelson and Sidney Smith recall to visitors many varied and exciting stories from naval history. The sword is still a part of a naval officer's uniform, and in this island many naval officers' swords must be preserved in naval families. This book will interest the owners of these swords. The serving officer will want to know something of the history of the weapon he is proud to wear as a symbol of his military ardour. For the sword is a weapon of great antiquity and can probably still claim to have been responsible for more carnage in battle and in pursuit than has yet been brought about by more modern and devastating inventions. The sword being a personal weapon has also become a symbol of a man's courage and a nation's honour and endeavour. Shakespeare tells us not to let the dew rust its bright blade, and Blake, the poet not the admiral (who had a better use for it), pictures for us some demi-god, restless sword in hand, building a new Jerusalem. It is also claimed to be mightier than the pen. An able pen has at last recorded the story of the sword and produced a book which should have a ready entry into museums and libraries and into many homes. He has given us a most comprehensive account of the naval officers' swords exhibited at Greenwich and much else besides; in particular, his list of Swordsmiths, etc., should ensure his work a permanent importance.

G. P. B. NAISH

THE DUTCH IN BRAZIL, 1624-1654. By C. R. BOXER. Oxford University Press. 1957. $8\frac{1}{2} \times 5\frac{1}{2}$ inches; xvi+328 pages; *frontispiece and 4 maps*. Price 42s.

During the three centuries between the discovery of Brazil and the achievement of that country's independence the only real attempt to dispute Portuguese sovereignty there was made by the Dutch. There had indeed been a small French settlement with the high-sounding name of 'La France antarctique' near Rio de Janeiro in the early days, but this had lasted only 5 years and had been easily extinguished as soon as the Portuguese thought this necessary.

The Dutch settlement in the northern part of the country, with its capital at Recife (Pernambuco), was far more extensive and rather more durable, but even so lasted only from 1624 to 1654. It was established in a district already held by the Portuguese and had to be maintained for most of the time by military force supported and renewed from home by the exercise of sea-power. If that sea-power had not been diverted and weakened by war with England, the history of 'Dutch Brazil' might have been different.

We tend to look on the year 1588 as marking the transfer of the dominion of the seas from Spain and Portugal to England and the Netherlands, but the story of this episode in the history of Brazil shows that the process was not complete for at least another fifty years. Portugal and Spain, then under one ruler, could and did send to Brazil fleets as strong as those of the United Provinces; this was so even in 1639, when their main effort was directed towards Dunkirk with disastrous results.

Professor Boxer's study of this short period is a general history and he has therefore not been able to deal with naval operations in as much detail as some of his readers may wish, but his book is so copiously supplied with references and his bibliography so thorough that anyone wanting to know more of the naval side of the struggle will know where to find it, though he will have to be, like the author, equally at home with Dutch and Portuguese to make use of the material at his disposal.

Certainly he could not have a better starting-point than this book. The only thing against it is its price and for that the author is probably not to blame.

R. C. ANDERSON

HERALDRY IN THE ROYAL NAVY: CRESTS AND BADGES OF H.M. SHIPS. By ALFRED E. WEIGHTMAN. Gale and Polden. xviii+496 pages; *frontispiece and 14 pages of half-tones; numerous line drawings in text; index*. Price 30s. net.

Mr Weightman's full and companionable book includes a history of ship's badges in the Royal Navy, official and unofficial. There is a record of how they are designed and cast, and an account of the honours and histories of a number of ships, whose badges the author has drawn, his illustrations being made from the Admiralty sealed patterns. It is not complete, for that would entail the reproduction of well over 2000 badges, but it is unlikely to be superseded, and it was eminently worth doing.

It is only since the interest and sustained work of Major Houlkes, of the Tower Armouries, in the reign of King George V, that the design of naval badges became ordered and orderly. It is now an official matter, the College of Arms being responsible for design, and the Admiralty for approval and for casting, which is done at Chatham Dockyard. The badges themselves, nearly always appropriate, and sometimes amusing, conform to an over-all pattern which includes the naval crown, and from Mr Weightman's illustrations it is at once clear how greatly the Service has benefited through the skill of the professional herald. A few of the older designs were good; many more were feeble. Even to-day there is sometimes room for improvement. *Ariel's* badge, for instance, seems an indifferent production; the *Iron Duke's* bears a sadly travestied profile of Wellington; while the *Kempenfelt's* badge, admirable as it is in itself, has an unfortunate allusion

(or so it must seem to anyone who has read the minutes of the resultant Court Martial) to the loss of the *Royal George* in 1782. Most are fine: including *Nelson, Noble, Orion*; *Swiftsure*, based on a vigorous old figure-head; and that most decorated of all ships, so far as battle honours are concerned, the *Warspite*.

Mr Weightman's book has occupied him many years, and it will give great pleasure to all who are interested in the incidentals and graces of naval life. Perhaps there is no branch of nautical lore and craft in which tradition is put to better use.

OLIVER WARNER

THE ANGLO-PORTUGUESE ALLIANCE. By EDUARDO BRAZÃO, K.C.V.O. (Hon.). The Sylvan Press. Price 8s. 6d.

This little work contains a twenty-six-page discussion of the origins of the alliance from the time of the capture of Lisbon by Dom Alfonso Henriques with the assistance of Anglo-Norman (and other) crusaders in 1147 to the Treaty signed at Windsor in May 1386. It is followed by the texts (in English save for the first) of the treaties of 1353, 1373, 1386, 1642, 1654, 1660, 1661, 1703, 1810, 1815, 1891, the Salisbury-Soveral Secret Declaration of 14 October 1899, the Arbitration Agreement of 1904, and the Agreement regarding the use of facilities in the Azores, August 1943 (pp. 27-54). Sir Winston Churchill, speaking in the House of Commons on 12 October 1943, implied that the existing alliance goes back to 1373, and Senhor Eduardo Brazão opts for 1386. Nevertheless, the alliance lapsed completely during the 'sixty years' captivity' of Portugal to Spain in 1580-1640, and the inconvenient fact remains that the Commonwealth declared war on King John IV of Portugal in 1650, for sheltering Princes Rupert and Maurice in the Tagus. The really important treaties are those of 1654 and 1661 (that of 1660 was never operative); and the alliance in its existing form hardly goes back further than the declaration of 1899, which, among other things, guaranteed the integrity of the Portuguese colonies against all enemies, present and future. The importance of the alliance for the maritime and commercial history of Great Britain needs no stressing, and it was a happy idea of Senhor Eduardo Brazão to publish the text of the relevant treaties in this handy and well-printed format on the eve of the Queen's state visit to Portugal.

C. R. BOXER

EMMA IN BLUE. By GERALD HAMILTON and DESMOND STEWART. Wingate. $5\frac{1}{2} \times 8\frac{3}{4}$ inches; 157 pages; 7 half-tone plates.

This book deserves no notice except as an example of how not to write biography. It is the story of Emma Hamilton at Naples, 1784-1800, of her friendship with Queen Maria Carolina, and of her effect on Nelson. It repeats, without proven evidence, all the old libels on the two women. The publishers refer blandly on the jacket to material 'never before published', but not one reference is supplied, there is no index or bibliography, and there is no indication as to which of the two authors supplied the history, and which the glitter.

The history is superficial. Mistakes both of inference and of fact are so many that they soon cease to be worth noting. Typical examples of the latter are: 'Ferdinand [of Naples] was the second son of Philip V of Spain' (p. 4); 'Sir William Hamilton . . . his chest ablaze with the stars of his various orders' (p. 29)—he had only the Bath; Nelson 'read little history' (p. 53), a prime joke this, to those who know his *Letters*; 'Certain advantages of position which lay with the English'—at the Nile!! (p. 64); 'One eyed Admiral'—Nelson (p. 69); 'The Walpoles no doubt had never heard of him [Nelson]—and cared less' (p. 70); Ferdinand in 1798 'looting' the Pope's pictures for Sir William Hamilton (p. 77); 'The *Colossus* wrecked off Sicily' (p. 79); Malta described as falling, before Nelson left the Mediterranean (p. 105); 'With opium, Emma was Maria Carolina's strongest addiction' (p. 110); Nelson 'always embarrassed when surrounded by those more accustomed than himself to social life' (p. 123); 'Sir William Scott, who had been chaplain on board the *Victory*' (p. 151).

These random items will give scholars an indication of the quality of this book. One wonders how many of the documents, 'unpublished' and otherwise, derive from the two volumes of *Hamilton and Nelson Papers*, privately printed by Alfred Morrison (1893-4). If it were worth the time, it would be amusing to count.

OLIVER WARNER

THE HAVEN-FINDING ART. A HISTORY OF NAVIGATION FROM ODYSSEUS TO CAPTAIN COOK. By E. G. R. TAYLOR, Emeritus Professor of Geography, London University, Hon. Member of the Institute of Navigation. With a Foreword by COMMODORE K. ST B. COLLINS, R.N., Hydrographer of the Navy. London: Hollis and Carter. 1956.

'The Arte of Navigation, demonstrateth how, by the shortest goodway, by the aptest direction, and in the shortest time, a sufficient ship, betwene any two places (in passage navigable) assigned; may be conducted: and in all stormes and naturall disturbances chauncyng, how, to use the best possible meanes, whereby to recouer the place first assigned.' A better definition of the art of navigation than Dr Dee's, of 1570, is hard to find. A better book on the art of navigation down to Captain Cook's days has not been written in the English language (and I know of none at once so succinct, authoritative and informative in any foreign language) as Professor Taylor's recently published work. It fulfils admirably a long-felt need amongst all English seafarers with an interest in their profession beyond mere gain or duty, or in their hobby deeper than mere acquisition of skill in boat and yacht handling. Moreover, this history—for history it is though written with a fluency and ease of style that conceals a depth and width of knowledge of the subject of the first order—this history should do something towards lightening the darkness that enshrouds, only too often, the academic mind when it attempts to study or describe maritime events in history. Innumerable books have been written about voyages of exploration, voyages of colonization, about sea-battles and about sea-commerce, yet hitherto there has been no English history written describing how, from classical times down to the eve of the Industrial Revolution, men were able to find their way across the seas in ships. This, surely, is a startling fact, for it is ship-borne commerce alone that has made the western-type of civilization possible (in particular that of Britain and the Commonwealth), and that has nourished civilization until it has spread over all the habitable areas of the globe. It is no exaggeration to say that the growth, extent and material richness or poverty of civilization at any given time has been directly conditioned by the existing techniques of sea-faring.

In this art, the first requirement, after provision of a sea-worthy vessel and a seaman-like crew is the means to conduct the vessel between any two places assigned, and a seaman expert in the knowledge and practice of those means. Professor Taylor explains those means, why and how each was first developed, and how seamen acquired proficiency in the use of each—for the fact is that the means have been the product, in the first place, of the ingenuity of landmen. Nor is this surprising, for a ship, particularly a small, wooden vessel propelled by oars and oarsmen, or by straining masts, spars and sails, is not a setting conducive to scientific invention, or to the collation of scientific data, by men busy about their daily duties. Yet navigation depends upon this—upon the collection, ordering and recording of observable facts about the sea, about its animal and vegetable life, about the texture, colour, smell and taste of the sea-bed, and about its depth below the sea's surface; about the shore-line and the coast-line, and the rise and fall of the waters and their flowing to and fro; about the winds that blow over the sea, and about the birds in the air, and the scent from the land, and the sound of the roar of breakers on hidden reefs or on a lee-shore; and, finally, about the movements of the sun and of the moon and of the stars.

Now the object of acquiring all this knowledge has been to guide the sailor through the trackless wastes of the seas so that he might carry the natural products of the earth and the manufactured goods of diverse peoples between one market and another in safety and with the least practicable delay. It is a story of high romance. It is a story stranger than that in any modern

science-fiction novel. It is the truth about how men learnt to move about the pathless seas that unite the peoples of the earth, for the seas are one and they are pathless.

Until the Industrial Revolution a ship was the most complex and most powerful piece of machinery yet devised by man. In her construction she embodied, however imperfectly, an extraordinary number of scientific principles; similarly, her conduction between any two places assigned involved the use of an exceptional number and variety of scientific data. The sea has stimulated the growth of science to a greater degree than many people suspect. The reader of Professor Taylor's book cannot but be left with this impression on laying it down.

But he will not lay her book down for long. This is a book that all interested in the sea and in sea-faring will be wise to keep at hand. It holds a fund of information about the seaman's arts of pilotage and navigation to be found assembled together in such admirable order nowhere else. It is a source book that will settle many a query concerning the practices of pilots in the past and clarify many an obscure point about the instruments they used at various times in various seas to find their way about when out of sight of land, or to fix their position off the ever-dangerous coast. But this book does more. It explains why they developed or did not develop, certain techniques. To understand this is to understand why navigation developed as it did and why the developments were adopted, now by the seamen of one sea and one age, now by the seamen of another sea and another age.

Professor Taylor is a geographer. She therefore thoroughly understands the physical characteristics of the seas and their shores, knows the wind systems and currents of the oceans, the tidal ranges and cycles of the coasts and havens of the world, and is conversant with the marine life above and below the surface of the sea, and with the nature of the sea-bed of each continental shelf. How these diverse factors have assisted or obstructed seamen in the pursuit of their business she recounts with admirable lucidity. As a consequence (to give only one instance), she gives a description both graphic and convincing of the hitherto obscure sea-faring art of the Scandinavian and Irish explorers, colonists and traders of the first millennium (and, by inference, of the seamen of earlier ages in northern waters).

It should give seamen and historians cause to wonder that this admirable book, like another treating of the sea in masterly fashion, Rachel Carson's *The Sea Around Us* (the perfect complement to Professor Taylor's book), is the work of a woman. There is, it is true, the occasional turn of phrase that does not ring true to the professional seaman's ear, but actual errors are notably few for a book of this scope and depth of content. It may be observed in passing that in plate II the sailor is holding the braces, not the sheets; that on p. 105 'the increasing capacity of ships to sail into the wind' should read 'near the wind'; and that on p. 231, 'winds. . . which might be on the poop or on the quarter' should read, from the Portuguese context preceding the phrase, as 'from astern or from before the beam' (*pela bolina* signified sailing on a bow-line and for ships of that period (c. 1604) within six points of the wind).

There were fundamental differences between the art developed for navigation in the waters of north-west Europe and the—earlier—art developed for navigation in the Mediterranean and, later, in the oceans. Most sea voyaging off north-west Europe was made in the tide-tormented seas covering the broad and shallow continental shelf, where visibility is often poor and where the coasts are either low-lying with shoal-seamed approaches or else are rugged in the extreme. Moreover all coasts, whether rugged or low-lying, are made most dangerous by a rapid rise and fall, twice daily, of tides of a wide and varied range. The lead and line was therefore, and still is, in its modern form, the most important instrument. Its use dominated the pilot's art. Not merely because by giving the depth of water it gave clear warning of danger but because, by showing the nature as well as the depth of the sea-bed beneath the surface of these opaque seas, it provided the surest indication of position when a vessel was in soundings; a vessel in these seas was rarely out of soundings; moreover, if she was, the first indication of approaching the coast was the sudden return to soundings—the 100-fathom line—for beyond it the sea was deeper far than did ever plummet sound.

In the Mediterranean conditions were otherwise. The continental shelf is narrow. Off most coasts, within a few miles to seaward, the sea bed plunges precipitously hundreds of fathoms down

to the central trough. The lead and line was, and is, again in its modern form, therefore, rarely of use outside visibility distance from the coast. However, the seas are virtually tideless, the air, too, is clearer than in the higher latitudes so that visibility is generally good. Because of these characteristics stars were early used for checking direction and progress could be fairly reliably computed in terms of distances of fixed units of length. With the development of writing written sailing directions recording distances and directions (at first in terms of identifiable winds) were brought into use. By these means the navigator could cross the seas with a sense of security, although ignorant of the nature and depth of the sea-bed *en route*. Probably he used charts too.

The great increase in commerce that resulted from the Crusades, involving frequent voyages along the length of the Mediterranean, quickly brought the compass, compass-chart, sand-glass and marteloio into use to supplement the sailing directions. The marteloio was a form of traverse table giving the direction made good towards a destination on the basis of the course steered, and was an indispensable device, now ships could sail on a wind, for calculating and plotting position on a chart. Its invention was dependent, however, upon the adoption of the Hindu numeral system as transmitted by the Arabian scholars and businessmen of Spain and the Near East.

These inventions of the eleventh or twelfth centuries were the first great scientific developments in the art of navigation. Their use involved measurement and calculation.

The next great development came in the fifteenth century with the introduction of celestial observations, first to check the estimated distance sailed down the African coast, then to fix positions in terms of angular distance from the equator. The method was perfected by Jewish astronomers of Portugal and Spain, or new Christians versed in astronomy. From the latter half of the sixteenth century the navigational developments were, without exception, all made for northern seamen practising oceanic navigation. The inventors, mostly Englishmen, like the Italian, Marjorcan, Spanish and Portuguese inventors before them, were almost all scientists versed in astronomy and mathematics, few of whom went to sea except for short periods to test their theories by some practical experience. The Mercator chart, meridional parts, logarithms, the reflecting quadrant and, finally, the chronometer, inventions that revolutionized the practice of navigation yet again, were all the products of ingenious landmen. This does not belittle the achievements of the men who used, with varying degrees of skill and success, the inventions made for them, but it suggests that for sea-faring nations sea-affairs are too serious to be left entirely to seamen. The great periods of navigational invention have all been marked by a deliberate national policy of improving the art of navigation by invoking the aid of scientists. It is certain that it was such a policy that resulted in the development of astronomical navigation in the fifteenth century, and of mathematical navigation in the seventeenth century—a subject that Professor Taylor deals with only in outline. It is most reasonable to suppose—for it is unlikely that it can be proved in detail—that the revolutionary developments of the eleventh and twelfth centuries were likewise the fruits of such a policy, the techniques were the inventions of essentially scientifically trained minds.

The decline in the fertility of inventiveness of the Iberian official schools of navigation that is such a remarkable feature of navigational history after the middle of the sixteenth century is to be attributed, surely, more to the expulsion of the Jews and persecution of the new Christians, amongst whom were to be found all the most notable Iberian scientists, than to the fossilizing effect of systems of State schools of navigation. The iron rule of the Inquisition, introduced into Spain in 1478, and into Portugal in 1536, inhibited scientific thought and innovation. In England, where Jews had been excluded for centuries, the native genius was kept free, as in Holland, from the middle of the sixteenth century, from the dead hand of the Inquisition and the intellectual rule of the Jesuits (introduced into Portugal in 1545). Scientific innovation in England and Holland could flourish without fear of persecution. In England, from the middle of the sixteenth century, Trinity House and Gresham College and the chartered trading companies actively fostered the application of science to navigation for many critical years—until the Crown stepped in towards the end of the seventeenth century. The work of Trinity House, and the systems of buoyage, beaconage and light-houses, and the dredging of harbours and channels are mentioned only in passing by Professor Taylor. That these are all an important part of navigation, and had

considerable attention paid to them by maritime authorities from early times, should not be forgotten. They are the aids used first and last by the navigator leaving and making his port, but of course, belong chiefly to the art of pilotage.

It seems curious, when one reflects, that although the peoples of these islands depend entirely for their livelihoods upon the ships that traverse the seas that separate them from the rest of mankind and from all the resources of the world, there is neither in this country nor in its far-flung Empire, nor yet in the British Commonwealth of nations in any University a Chair of Maritime History. To this significant fact can be attributed a great deal of the general ignorance of the seaman's art and the lack of a lively appreciation by the inhabitants of these islands of the work of those of them who go down to the sea in ships and occupy their business upon great waters. London is the greatest port of the land, and, indeed, of the world. It is at least appropriate that it should be a Professor of London University who should have written this admirable book on the seaman's art of navigation. It is to be hoped that a companion volume will bring the history up to modern times. How many people know how Nelson navigated? or the masters of the clippers that rounded the Cape and the Horn? or how the first airmen crossed the Atlantic?

D. W. WATERS

FORLORN HOPE. 1915. THE SUBMARINE PASSAGE OF THE DARDANELLES. By Rear-Admiral C. G. BRODIE. London: Frederic Books, W. J. Bryce Ltd. $8\frac{3}{4} \times 5\frac{1}{2}$ inches; 91 pages. Price 10s. 6d.

This book, written by one who was intimately concerned with the exciting incidents described, and about a phase of the 1914 war of which little was known at the time, is somewhat difficult to place. It is a short book: a bare 91 pages. It can hardly be described as detailed and precise history; but it can certainly claim to be a gripping narrative of the submarine campaign in the Dardanelles in 1915.

For myself I can only say that having read through the first chapter I never laid the book down till I had read the last, and then I turned back and read it all over again. A pretty good recommendation in itself.

For the ordinary lay reader, perhaps the most fascinating and interesting passages in the book are those introducing such famous names as Roger Keyes, John de Robeck, R. E. Wemyss, Commodore Samson, Holbrooke, V.C., Nasmith, V.C., Stoker, Boyle, and many others. Names little known outside the Services before the war; but which became world-famous after it. The author knew them all, and he gives us little glimpses of these men and their idiosyncracies both in peace and war.

When shortly after the declaration of war, on 4 August 1914, the German battle cruiser *Goeben* and the light cruiser *Breslau* escaped through the Dardanelles to the neutral safety of Turkish waters, their presence at Constantinople immediately tilted the balance of power in the Near East, and led to the Turkish declaration of war against Russia, and incidentally closed a vital link of communication with our Eastern ally.

In February 1915, at Russia's urgent request, a squadron of British and French battleships, with their attendant smaller warships, bombarded the outer parts of the Dardanelles, and on 18 March the allied squadron tried to break through. They failed dismally, with the loss of several battleships sunk, and many other ships badly damaged. The Turkish defences were in fact far stronger than had been anticipated.

It now began to be realized in Whitehall, that before sending a naval force into the Black Sea to help the Russians, both banks of the Dardanelles and the Bosphorus must be captured and strongly held by allied troops. A military landing was therefore imperative, and till it became known to the enemy exactly where such landing or landings were to take place, the main Turkish forces must be held in reserve.

When the Turkish army did move to the attack of the invaders, the quickest route for re-

inforcements and supplies to reach them would be through the Sea of Marmora. A threat to that line of communication might well be decisive. And here the author draws an analogy between this campaign and that of the submarine attacks on Rommel's supply lines in 1941 and 1942. Our losses in both campaigns were cruel and severe: but the losses inflicted on the enemy were many times heavier, in ships, men and munitions.

But for our submarines, nothing could have prevented Rommel's Army from driving right through to the Canal.

Surface warships, as we have seen, had utterly failed to force the passage of the Straits. Could submarines—an unproved weapon in warfare—force the gap of danger and cut that vital line of communications?

The worst obstacle to be surmounted, from the submarines' point of view, was not Turkish defences of guns and mines, but the powerful and erratic current of fresh water which runs for thirty-five miles out of the Marmora into the Aegean. Of the swift-running salt counter current underneath the fresh water, flowing back to the Marmora, nothing was known at all, and not much more to-day. The length of the Strait and the strength of the outgoing current, from $1\frac{1}{2}$ to 4 knots, precluded the possibility of any submarine making the whole passage while submerged. It would have been far beyond the capacity of her batteries, and any vessel moving on the surface would almost certainly be spotted and blown to pieces by the shore batteries.

That then, was the problem that presented itself to Roger Keyes, commodore of submarines and his staff. Keyes summoned a conference of his submarine commanders and other officers concerned. The author of *Forlorn Hope*—then a commander on Keyes's staff—was the appropriate officer to open the proceedings. With the chart of the Straits on the table, he outlined a possible plan (originating with Stoker who was unavoidably absent), pointing out the navigational and military dangers, and called for questions at every point. After some discussion and argument, Keyes abruptly closed the debate, and put the question 'Do you think an "E" boat can make it?' He looked at Somerville, the senior of the group. After a moment's consideration Somerville said firmly, 'No'. An equally decided 'no' came from all the others: all except one, T. S. Brodie the junior of them all, and commanding officer of E. 15. He shyly answered 'Yes'. The effect of that answer was electrifying. Keyes jumped to his feet and said: 'Well, it has got to be tried, You shall do it.'

Of the brave but unsuccessful attempt and of the loss of E. 15 and her gallant commander, the reader must learn for himself. The whole story as narrated by the author has a rare and touching poignancy, for the commander of E. 15 was his dearly loved twin brother.

It is now well known that after these early failures, the passage of the Dardanelles was forced by several other submarine commanders: Stoker, Nasmyth, Boyle, Cochrane and Price are names that will live in the history of submarine endeavour.

To quote from the author's epilogue: 'The submarine campaign in the Marmora was the most successful, and the most potentially decisive naval operation of the 1914 war, and our forlorn hope was its essential preliminary. Looking, as we have, at this phase as a separate episode, it is clear that Stoker was the first to propose and to perform the spectacular feat that opened the way to victory.'

But Stoker rotting in a Turkish prison was forgotten by all but his friends. True he returned to England after the war, but few people then had ever heard of A.E. 2. And after the Armistice in 1918, the Dardanelles campaign was regarded as one of the most futile, inglorious and mis-managed campaigns in British history; something to be relegated to the limbo of 'Old unhappy far-off things, and battles long ago'. The brave men who fought and died at Gallipoli were in no way to blame for this.

Let us, however, never forget the men who really did accomplish something worth while, the submariners.

A. MACDERMOTT

V.C.'s OF THE ROYAL NAVY. By JOHN FRAYN TURNER. Harrap. $5\frac{1}{2} \times 8\frac{1}{2}$ inches; Price 9s. 6d. net.

Interest in the Victoria Cross, always high, was more so than ever last year, during which the Centenary celebrations and a first-rate exhibition at Marlborough House were held. It was a good idea in every way to provide the background stories for the twenty-four Crosses which were won during World War II by the naval forces and the Royal Marines. The emphasis is on the word 'background', for the official citations published in the *London Gazette*, which were drafted in the earlier part of the war by the late R. M. Y. Gleadowe, and from 1944 onwards by Professor J. P. Droop and the present writer, were of necessity concise and even bare.

The V.C. stories are as varied as they are inspiring. They range from acts of individual valour, such as those of Jack Mantle and Alfred Sephton at their guns, to protracted ordeals entailing great responsibility like those concerned with destroyer actions and the *Fervis Bay*.

I can add one scrap of history hitherto unrecorded. When the name of that prince of submariners, Malcolm Wanklyn, was submitted to King George VI for award, the citation was in effect for his cumulative gallantry, not for one specific action. The King pointed out that the V.C. was generally given for a *particular* episode, and when the most outstanding of Wanklyn's many exploits was picked out for recognition, approval was given at once.

Mr Turner has gone to trouble to get the circumstances of the actions into perspective, and the result is both exciting and worth while.

OLIVER WARNER

VOICES ON THE WIND. POLYNESIAN MYTHS AND CHANTS. By KATHARINE LUOMALA. Published by the Bernice P. Bishop Museum, Honolulu. 1955. $10 \times 6\frac{3}{4}$ inches; 191 pages, illustrations by Joseph Feher. Price not given.

In the most interesting narrative of his life on the Tonga Islands, 1806-10, Will Mariner gives a humorous account of the native chief Finau's astonishment, as he saw that the white man could use writing to remember words and tales. The Polynesians did not know written traditions, only oral ones. Reciting of poetry and telling of tales played an important part in their life, and the recollection of common people was so good that they were able to remember long poems which they had only heard once and recite them by heart. Their 'bards' composed epic poems about many events, and they were soon known by all people. As Captain Cook visited Mangaia in 1777, the cannibals for example made a poem about this, the 'Visitor's Song', which was performed with accompaniment by chorus and dance.

In her book Katharine Luomala tries to give a survey of the oral traditions of the widely scattered Polynesian tribes. It is no scientific book, rather an attempt to give an account in a spiritual, poetical language, corresponding with the style of the legends themselves. She arranges them in certain coherent groups (for instance about the gods and human beings in Heaven and on Earth, about Menehunes, the Little people, about Maui, the superman of the South Sea, about Love, etc.). The European reader finds the sentimental, almost elegiac tone of the legends rather strange, although fascinating. They are certainly not like our European traditions. They create a tender and beautiful impression, they are rather long and slow, not very dynamic, not very logical in their construction. In reading them we are constantly reminded of old tales from our youth, about the happy *Oraheite* (*Tahiti*) which Captain Cook and others told the amazed world about, where people lived without sorrows, where there were charming women, sunshine every day, beauty and joy—ideas which have influenced our fancy and longings and have given us a practical impression of a real paradise on earth.

The traditions of the South Sea give very little of interest for the maritime mind. A deed like the migration of the Polynesians over the Pacific Ocean, thousands of miles beyond the sea, with colonization of the small islands of the immense area, is of course one of the themes of their poetry, but everyone who seeks facts about this imposing piece of 'viking' deeds and the marvellous

seamanship will be disappointed. There is no historical truth, no chronology, no maritime information to be found in the legends. They are just poetry, but very fine poetry.

The tale about the loving couple Tinirau and Hina alone seems well-known to European folklorists. It is, simply enough, a 'megalithic' tale of Indo-European origin, borrowed in times of old by the forefathers of the Polynesians and brought with them from their old homeplace over the sea, aeons ago. We find the motives well preserved in numerous folk-tales of all European nations, back to the old Roman tale of Amor and Psyche.

HENNING HENNINGSSEN

The illustrations are beautiful.

THE SECOND CHINA WAR 1856-1860. Published by the Hon. Sec., Navy Records Society, Royal Naval College, Greenwich, London, S.E. 10. $9\frac{1}{4} \times 6\frac{1}{4}$ inches. Price to non-members, 45s.

This, the ninety-fifth volume of the publications of the Navy Records Society, contains 247 documents assembled by the late D. Bonner-Smith, Admiralty Librarian and Honorary Secretary of the Society, and arranged by Mr E. W. R. Lumby, who has supplied an introduction, setting forth the events that led up to the outbreak of the Second China War, with lucid summaries attached to the six Parts comprised in the work.

The appearance of so many of the original papers relative to this notorious conflict is of especial interest owing to the general misapprehension of the characters of those concerned in the quarrel. Many still regard Sir John Bowring as a tyrannical proconsul, who dragged his country into war in an unjust cause and fulminated charges of 'insolent barbarian' against the scholarly and inoffensive Imperial Commissioner Yeh. A perusal of the documents issued by those two functionaries will yield a very different picture. In days when an affront offered to the British flag, unless atoned for by prompt apology and reparation, was considered a sufficient provocation for undertaking military operations, it is hard to see how Bowring could have done less than he did; and what he did received the approbation of the Palmerston Government and, on a general election being held on this precise issue, of the electorate.

The intransigence and evasiveness of Commissioner Yeh, as evidenced by his own writings, will be only too familiar to any who have had occasion to urge an unwelcome course upon Chinese officials in recent years. China, indeed, to-day is what China was a century ago. *Plus ça change, plus c'est la même chose*. Yeh's barbarity is adequately displayed in his proclamation (No. 47), his insolence, thinly veiled, in his every letter.

With the appointment of Lord Elgin as Plenipotentiary with full powers to settle differences with China, Bowring departed from the picture; and the narrative is thenceforth occupied more with the subsequent naval operations than with futile negotiations with the Chinese. Elgin, however, was handicapped from the start by the necessity of diverting the bulk of his forces to assist in quelling the Indian Mutiny, which broke out while he was approaching Ceylon; and it was almost a year later before he was able to take the decisive step of capturing the city of Canton and disposing, once and for all, of the obstructive Commissioner Yeh.

Yet the war was not over. The Government at Peking, while prompt to dismiss its unsuccessful servant for 'maladministration', had no thought of repairing the harm done, and it became necessary for Elgin to undertake an expedition to the north for the purpose of coercing the recalcitrant Emperor. The taking of the Peiho Forts and advance to Tientsin had the desired effect of inducing the Chinese Government to open negotiations, and a Treaty was signed within a month. However, when the time came for ratification, the Chinese adopted obstructive tactics once more, and all was to do over again. This time it was at Peking itself that terms of peace were signed.

The selection and arrangement of the various papers illustrative of this remarkable episode and the summaries attached set forth the whole story, in due chronological order, with especial clarity in respect of the naval operations. There is an excellent frontispiece, consisting of a reproduction of *The Times* 'Special Correspondence Plan of the Attack and Bombardment of Canton'; and three

sketch maps afford elucidation ample for the understanding of all the naval measures related. There is a full index, and indeed no pains have been spared to render the volume a complete and intelligible compendium, with documentary justification, of the diplomatic and naval activities of the war.

There are hardly any misprints in this book of 413 pages, and none is significant. It is suggested, however, that the French General's name, on page 391, should perhaps be Montauban and not Montaubon: it is with the former orthography that the French Concession at Shanghai commemorated him in the name of a short, but well known, road.

T. C. GERMAIN

THE WESTERN OCEAN PACKETS. By BASIL LUBBOCK. Glasgow: Brown Son and Ferguson Ltd. (Reprinted.) $9\frac{3}{4} \times 7\frac{1}{4}$ inches; Illustrated. Price 30s.

This reprint of one of Lubbock's books on square-rigged deep-water sailing ships will surely be welcomed. With its re-appearance every title in the author's well known Clipper Ship series is once more in print. The book was originally reviewed in this *Journal* in Vol. XI, p. 445 (1925).

The period dealt with is the first half of the nineteenth century; a time of great emigration from Europe to America. The book states that between the years 1815 and 1854 no fewer than four million passengers left the British ports for America. A large proportion of this number was carried in these British and American sailing packets, many of which were vessels of less than a thousand tons; what we would now consider rather small. They had a reputation for being 'hard-case' ships, particularly the American ones, and they were driven hard. Eastbound passages of under fourteen days were occasionally made by them, pilot to pilot, sometimes beating the time of the passenger steamers of that day.

Needless to say the emigrants, often 500 or more in a ship, had a pretty uncomfortable time of it, and Lubbock gives a vivid description of their miseries in such crowded conditions in bad weather.

In their day and for many years afterwards the names of some of these Western Ocean Packets and their captains were household words among deep-water sailors.

Part I of the book gives descriptions of the more famous of the ships and of some of their voyages. Part II deals with life in the packet ships and with anecdotes of the captains, crews, and passengers. Some of these yarns seem rather highly coloured and with somewhat fanciful dialogues, but perhaps it is to be expected that a book reprinted as this one has been over thirty years after its first publication is likely to have a slightly old-fashioned look about it.

Appendix I is an abstract log of the American ship *Garrick*, 895 tons, on a voyage from New York to Liverpool and back in 1854. Notes by Captain R. B. Forbes in 1847 are in Appendix II. Both these are of interest as having been written at the time by people who had actually sailed in these packet ships.

Appendix III gives details of the ship *Cornelius Grinnell* built by Donald McKay at Boston, Mass., in 1850. Appendix IV is a list of the chief ships built by that famous shipbuilder, and Appendix V gives a table of the best sailing passages across the North Atlantic. Many of these passages were of only thirteen days, and some were even less.

There are seventeen illustrations of the ships, all reproductions from paintings. Although most of these are well drawn, it seems rather a pity that photographs of some of these famous ships were not used. There must surely be some in existence. A scale drawing and a sail plan might also have added to the value of the book. There is a statement on page 33 which at first sight seems strange. It is due to a printer's error. Referring to the handiness of the ships, Lubbock says that pilots 'could turn them to windward through passages like the *Gulf Stream* on their way to the Downs'. This of course should be *Gull Stream*. However, this slight error is not likely to puzzle many seamen; at least on this side of the Atlantic.

The book contains a good index.

C. H. WILLIAMS

BEITRÄGE ZUM STUDIUM DES HANSESCHIFFES. By FRIEDRICH JORBERG. Offprint from ZEITSCHRIFT DES VEREINS FÜR LÜBECKISCHE GESCHICHTE, 1955.

DAS SCHIFF DER HANSISCHEN FRÜHZEIT. By PAUL HEINSIUS. Weimar, 1956. $9\frac{1}{2} \times 6$ inches; xl + 273 pages; 15 plates.

Mr Jorberg's short essay of fourteen pages starts by regretting the fact that hardly anything has been written in Germany during the last forty years on the ships of the Hansa. He goes on to discuss some of the work done before the First World War and in particular that of Busley, who included a 'Hansa-cog' in the series of sixteen models described in the book reviewed in the *M.M.* in 1922, pointing out that in this case, as in others, Busley failed to follow his own chosen authority, made his ship too modern in shape and let it appear that he had something far more definite to work on than he had in fact. Unfortunately, as the writer says: 'Busley's model with all its faults has been copied at home and abroad and has become the representation of a Hansa-cog.'

Next Mr Jorberg describes an experiment which other model-makers might well copy, the use of small blocks representing men, horses, casks, etc., to see how far a model more or less on Busley's plans could accommodate crew and cargo and leave room for working the ship. He gives photographs of the model in question and follows them with reproductions of four previously unused pictures of fifteenth-century ships. Finally, he lists a number of studies which he considers ought to be undertaken on matters connected with Hanseatic ships.

The longer book comes almost as an answer to this challenge. It deals with the period 1200–1400 and covers it extremely thoroughly, not only in its text, but in its fifty-six very clear drawings and thirty-one photographs, both mainly from seals. Some idea of its inclusiveness may be gathered from the mere classification of its contents: State of the enquiry, Explanation of Sea-terms, The sources, The Ship (the longest section), Construction and rigging, Seamanship, Other types, The crews.

In some respects the thoroughness has perhaps been overdone. For instance, the bibliography contains no fewer than 662 titles and it is hard to see what some of these, such as Chapelle's book on the U.S. sailing navy or Corbett's on naval strategy, can have to do with the subject. One feature of this bibliography can be heartily welcomed; each title has a number and these numbers are used as references in the footnotes. On the other hand, it is by no means free from misprints and is certainly incorrect in listing under Bowen, F. C., an article on 'The Rig of English mediaeval Warship' (*sic*): In *M.M.*, xxxi, pp. 8–89'. Such an article has never appeared in the *M.M.*; perhaps some reader can say where it is to be found.

Mr Jorberg's book would be well worth having simply as a source of references, both literary and pictorial, but it is far more than that and, even if one disagrees with some of his conclusions, one can only admire the extensive study on which they are based and the clear way in which they are presented. A host of points of interest might be mentioned, but it will be enough to take one or two which have already been discussed in the *M.M.* As regards the rudder of the ship on the Winchester font, Mr Jorberg agrees with those who believe it to be on the side, not on the stern, while he refuses to accept 1200 as the date of the seal of Ipswich, thus leaving the seal of Elbing (1242) as the earliest evidence for the stern-rudder. He claims that the straight sternpost came first and made the stern-rudder possible; he may be right chronologically, but seems to ignore the fact that the Mediterranean galley managed to hang a rudder on a curved sternpost, as many smaller vessels do today. While on the subject of rudders it may be worth mentioning that he says nothing about Brindley's 'duplex rudders' on the seals of Wismar and Stubbekøbing.

Towards the end of his study Mr Jorberg pays some attention to the ships described in Timbotta's Venetian MS. of about 1450 (*M.M.* 1925, pp. 135–63) and here he goes slightly astray in assuming that the measurements there given were in English feet. They are actually in Venetian feet of 348 mm., so that about 13% has to be added to the metric figures given.

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